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MEDICAL UNIVERSITY
OF
SOUTH CAROLINA

Annual Report
1983-1984



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OF
SOUTH CAROLINA

Annual Report
1983-1984



The Medical University of South Carolina does not discriminate on the basis of race, color, creed, national origin, ancestry, sex, age, veteran status, or handicap, in the recruitment and admission of students, employment of faculty and staff, and the operation of other educational activities and programs, as specified by federal and state laws and regulations.

MEDICAL UNIVERSITY OF SOUTH CAROLINA

Annual Report
1983-1984

Honorable Ladies and Gentlemen:

At my installation as President in October, 1983, I took the occasion to describe my vision of excellence. In addition to emphasizing a renewed pride in the University and the values it represents, I spoke of strengthening our dedication to productivity and service.

It is my pleasure to report that the response to that challenge has been extraordinary. The Medical University Hospital, through the substantial economies it effected while improving services, was designated a winner of the Governor's Award for Excellence in Productivity Improvement. One could ask for no better cooperation.

It was also a year of other successes in which research funding especially from the private sector continued to grow; outstanding leaders were appointed in Psychiatry, Pediatric Cardiology and Orthopedic Surgery; high national honors were accorded to faculty; and in which the University reached out to the international community through exchange agreements with Alexandria University in Egypt, the University of Valle in Colombia, South America, and the Kum Klao Foundation in Thailand.

Most important for the future, all units of the University engaged in long range planning to assist the University in establishing priorities in this age of exciting advances in the biomedical sciences. The information is being assembled for inclusion in a composite plan to guide the University in sound and orderly development.

I would like to express our appreciation for your continuing support and encouragement. You can count on our support to work toward a healthier and more prosperous South Carolina.

JAMES B. EDWARDS, D.M.D.
President

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MEDICAL UNIVERSITY OF SOUTH CAROLINA

The Medical University possesses the unique status of being the State's only freestanding academic health center providing a comprehensive range of programs in the biomedical sciences. As the State's major patient referral center, it offers the clinical climate essential to thorough preparation of health professionals. Its teaching, research and service roles are statewide in scope and have encouraged model cooperative affiliations.

Founded in 1824 as the oldest medical school in the South, the College of Medicine pioneered in the clinical teaching of students in a hospital specifically provided for this purpose and members of its faculty wrote some of the first American medical textbooks.

The University was a proprietary institution until 1913, when, because of financial stringencies resulting from new accreditation requirements, it prevailed upon the State to assume ownership. University status was achieved in 1969.

The University contains six colleges: the College of Medicine; College of Pharmacy, in continuous service since 1894; College of Graduate Studies, which issued its first graduate degree in 1951; College of Nursing, dating from 1883; College of Allied Health Sciences, established in 1966, which offers more than 20 training options; and College of Dental Medicine, which graduated its first class in 1971. A Dean of Continuing Education was appointed in 1979.

The University's honor roll of distinguished contributors to medicine includes Sims (founder of American gynecology), Thomas (surgical innovations), Strobel (epidemiology), Geddings (pathological anatomy), Wagner (pathological and surgical anatomy), Parker (neurosurgery), Porcher (germ theory), Chazal (epidemiology), Banov (community health), Lynch (asbestosis), Smithy (heart surgery), and Waring (medical history).

COLLEGE OF MEDICINE

The academic year brought major change in several areas which required accommodation by the College of Medicine. There was continuing evolution in the patterns of leadership with the interlocking of the Deanship and the University Administration (this arrangement is temporary) and there was accommodation to the need to demonstrate cooperation with the new School of Medicine at the University of South Carolina. Such demonstration took the form of an offer of full and equal partnership in the Consortium of Community Teaching Hospitals (formerly the MUSC Extension Program). It is a pleasure to report that this new partnership is working well, and the groundwork has been laid for meaningful future collaboration. A separate but related cooperative

effort was the unprecedented joint meeting of the two faculties of the USC and MUSC schools of medicine which was dedicated to the exploration of admission and curriculum differences. The success of the meeting resulted in a common agreement that such meetings should be repeated.

In lieu of legislation to "establish a board of directors for medical education" as proposed by the Commission on Higher Education (after failing to accept the recommendations of the Blue Ribbon Committee on Medical Doctor Education authorized by the Commission), the two Universities voluntarily established a "Joint Health and Medical Education Committee" with broad advisory powers over medical education and health affairs in the State. This agreement was reached to demonstrate cooperation between the two medical schools and the intent to reduce spending for medical education.

The adequacy of the pool of South Carolina students qualified to enter medical school has been of concern to both the Liaison Committee on Medical Education and faculty and has been the subject of considerable study. One of the resulting actions has been to broaden entrance requirements so as not to exclude good students with undergraduate degrees in engineering and the arts. Another action was a statewide meeting of academic officers from all those educational institutions concerned with premedical education for the purpose of identifying better methods of preparing students to enter the study of medicine. The meeting demonstrated the need to actively maintain communications with institutions which are providing the applicant pool.

Subsequent to many meetings of MUSC faculty and administrators with staff of the Commission on Higher Education, a formula for funding undergraduate medical education was established. Formula funding is designed to allocate the state's educational resources according to student enrollment. The formula for funding the Consortium Area Health Education Center is currently under study.

Vacancies in key positions of leadership which were filled included chairmanships in the Department of Psychiatry (Dr. James Ballenger) and the Department of Orthopaedic Surgery (Dr. John McGinty).

In the College of Medicine, a committee of distinguished faculty alumni was drawn to design and implement activities to promote and enhance alumni relations and medical student-alumni relations. The first and most notable events included: (1) Initiation of a Parents' Day program, (2) Formation of an Old Grads Association, (3) Special days of activities for seniors and juniors, and for sophomores and freshmen, and (4) Formation of a Student/Alumni Board. Because of these events and other efforts increased attendance by alumni reunions was experienced. The activities of this distinguished group are further discussed at the conclusion of this report.

After considerable study and trial, it was agreed that the status of the Department of Laboratory Animal Medicine would be changed from that of an academic department to a supportive administrative unit reporting directly to the Vice President for Academic Affairs.

The Liaison Committee's accreditation visit of May, 1983, resulted in continued (2-year) full accreditation of the medical school. The College's "progress report" (accepted in October of 1983) resulted in confirmation of the accreditation period to the academic year 1985-86 (to coincide with an accreditation visit from the Southern Association of Colleges and Schools).

The College budget experienced a growth approximating \$6.32 million. It is notable that there were gains in State, Federal and Other support with a \$3.48 million increase coming from the State.

A net full time faculty loss of 12 was experienced while part-time faculty increased by 70. The most notable increases occurred in the areas of Medicine (12), Psychiatry (13), Pathology (11), and Surgery (10).

The College has admitted 165 students each year since 1971. The number of females accepted has leveled off at 43; the total number of applicants continued to decline.

In 1983, of the 381 applicants from South Carolina, 161 were accepted. There were four black admissions in 1983 and six in 1982.

The Introduction to Clinical Medicine (concept), oriented to small interdisciplinary group teaching, now commands 40 percent of the curriculum in the first two years. The College is continuing to build pre-clinical instruction around problem solving.

An "Educational Environment" Committee was drawn to study and make recommendations regarding the health of the educational environment (student orientation, student problems, psychological support, advisor system and student faculty rapport). The Curriculum Committee was restructured to broaden the base of input for the University community as well as outside the University. The College has continued to increase the representation of clinically appointed faculty in the instruction of medical students (i.e., as opposed to those teaching residents).

Sophisticated studies of the applicant pool were completed with resulting new predictors of success. And, finally, the College explored the feasibility and established a process for the exchange of students and faculty with the nations of Colombia, Thailand, Egypt and Germany.

The College was saddened by the deaths of three members of the faculty in the course of the year: Dr. Joseph Stafford Redding, Professor of Anesthesiology, on March 13, 1984; Miss Irene Catherine Hughes, Instructor in Otolaryngology, on March 14, 1984; and Dr. Kenneth H. Herbert, Clinical Instructor in Pediatrics, on May 12, 1984.

As in the past, an annual report from one of the administrative units is featured. This year it is that of the Medical Alumni Association.

Alumni Liaison Committee

Major steps were taken to revitalize participation of medical alumni with the MUSC Medical Alumni Association through the creation of an Alumni Liaison Committee. Appointed by the Dean, eight faculty members, including one designated as Alumni Liaison Officer who is either Associate or Assistant Dean, serve as the major advisory body on alumni affairs representing the Dean and faculty.

Members include: Dr. Harold R. Pratt-Thomas, Chairman; Dr. W. C. Worthington, Jr., Alumni Liaison Officer; Drs. P. C. Gazes, Elsie Taber, J. R. Sosnowski, J. A. Richardson, C. W. Legerton, Jr., I. S. H. Metcalf, Leon Banov, Jr., A. H. Johnson, Henry Rittenberg, and Mrs. Betsy Waters, Alumni Director, and Miss Mary C. King, Assistant Director for Medical Programs. The Committee makes recommendations to the Board of Directors of the Alumni Association concerning policies, programs and activities, and any other appropriate business it cares to initiate. It serves in an advisory capacity to the Alumni Office. The faculty Alumni Liaison Officer communicates regularly with the Assistant Director of Alumni Affairs for Medical Programs.

By meeting once a month, the Alumni Liaison Committee is kept up-to-date with the operations of the Alumni Office. Conversely, the Assistant Director for Medical Programs is provided with continual information from the College of Medicine.

In the past year, this Medical Alumni Liaison Committee supported the Alumni Office in the sponsorship of a variety of special events, e.g., Parents' Day for parents and students, a reception following the Hippocratic Oath Ceremony, and the Old Grads' activities during graduation week. A contribution to the Senior Ball committee and the creation of the Pre-Alumni Council are indications of the efforts of the Alumni Office to involve students in alumni activities *before* they graduate.

Special events to stimulate membership in the Association have been planned both inside and out of South Carolina with the Committee's assistance. Included will be a reception during the Clemson/MUSC Continuing Education program "Sym-PAWS-ium," and a reception in the home of an alumnus in the French Quarter of New Orleans at the time of the Southern Medical Association's annual meeting. Various alumni are volunteering to host separate alumni functions in their homes as a way to improve membership.

Members of the Alumni Liaison Committee participate in the class reunions each spring and attend the Medical Alumni Association's Annual Luncheon held in conjunction with the South Carolina Medical Association annual meeting.

The Constitution and By-Laws are currently being revised to supply a more effective governing instrument for the Association, and to encom-

pass the many changes in the activities and methods of procedure which have taken place since they were last revised in 1972.

A broad range of university-wide alumni activities appears in the regular alumni section of this annual report.

COLLEGE OF DENTAL MEDICINE

The past year was a notable one for the College. Its five-year interim report to the Commission on Dental Accreditation of the American Dental Association resulted in full approval for the undergraduate and postgraduate programs.

Further, the senior class scored the highest grades on Part II of the Dental National Boards ever recorded by the College. Grades in each section were above the national average.

A new semiannual magazine *DMD* was published and was well received by dental alumni and friends. The magazine will serve to keep the dental profession current about activities in the College.

While many dental schools are having difficulty obtaining qualified applicants, the College had 120 applicants for 49 places, approximately 2.4 applicants for each position. The class size has been reduced in the past three years and will remain at about 48 for the next year or two. Eleven colleges in South Carolina were visited this year in an effort to continue to obtain well qualified applicants.

As a result of the self study of the curriculum carried out in the fall of 1983, some changes are being made to reduce duplication and remove outdated information. Four new electives were accepted and are now being offered under the titles of Dental Implants, Nickel Usage in Dentistry, Introduction to Computers, and Review of Systemic Emergencies. The length of clinic time in the junior and senior years was changed to achieve better equalization and the time for extramural assignments was reduced from five to four weeks. Basic science course directors continued to improve lectures and coordinate clinical findings with basic science information.

Dr. James Rivers was named chairman of Crown and Bridge and Dr. Douglas Nuckles was named Assistant Dean for Clinical Affairs replacing Dr. Charles King who became Dean at the University of Detroit Dental School. Dr. Richard Weems will replace Dr. Robert Fleming in Oral Diagnosis and Oral Pathology, and Dr. Charles Hook will replace Dr. John Hembree in Operative Dentistry.

Clinics operated at a good level of activities, with 6,380 patients receiving treatment and a total of 31,711 procedures being performed. In an effort to improve comprehensive care of patients, faculty advisors for clinical accomplishments were assigned to senior students, closely relating education and service for the mutual benefit of patient and student.

Dental faculty spoke to numerous dental societies and study clubs throughout South Carolina. Some of the programs were carried out in cooperation with the Area Health Education Center. The Continuing Education Section had 14 courses with a total of 868 participants, many from out of state. The College continues to cooperate with and support various activities for dental hygienists, dental assistants and dental laboratory technicians.

The College chose a few years ago to concentrate in areas of research where it could be well represented. This has occurred, and outside funding for dental materials, genetics, and oral inflammation have remained good. The Periodontic Department, for example, has received funds from three private companies. Attempts will be made to expand these activities this coming year. While students have a very heavy educational load, some are showing a better understanding and appreciation of the importance of research and its place in dentistry. The college will continue to encourage students to expand and improve research projects.

Dr. Neill W. Macaulay, former longtime member of the Medical University's Board of Trustees, passed away in December, 1983. The Macaulay Dental Museum remains as an outstanding memorial to him. Dr. Macaulay was highly respected as a dentist, historian and author. He will be greatly missed by the dental profession.

COLLEGE OF GRADUATE STUDIES

The applicant pool for 1984 increased over that of the previous year as the permanent recruitment committee chaired by Dr. Maria Buse engaged in a summer recruitment program as a major effort in attracting students. In addition the Dean, Associate Dean and two Graduate Faculty members made six recruiting trips during the year.

TABLE I

Student Application Data

<i># Students</i>	<i>1983</i>	<i>1984</i>
Applying	130	141
Accepted	48	54
Admitted	24	28*
Graduated		
M. S.	4	7
Ph.D.	12	15

*Anticipated

TABLE II

Student Qualifications for Admission

	1983	1984
GPA	3.40	3.36
GRE	1300	1153

TABLE III

Graduate Student Distribution

	M. S.	Ph.D.
Anatomy	1	1
Biochemistry	—	7
Biometry	13	18
Immunology	2	14
Pathology	—	5
Physiology	3	3
Pharmacology	—	13
Molecular-Cellular Biology	—	17
Pharmaceutical Sciences	—	4

Visiting Medical Scientist Training Program

The Medical Scientist Training Program, now under the supervision of Dr. James Ballenger, admitted two new candidates to the Colleges of Medicine and Graduate Studies to pursue an educational program designed to produce clinical investigators. The two had an average GPA of 3.57, an average GRE of 1235, and an average MCAT of 52. There are now 10 students in the program.

Graduate Student Travel

As an additional means of improving communication between the Medical University and the national scientific community, the College provided travel support for nine students to seven national meetings where they presented papers.

Visiting Professors

The Basic Science Graduate School Seminar Committee was responsible for the following seminar speakers during 1983-84: Dr. James Dahlberg, Professor of Physiological Chemistry, University of Wisconsin Medical School; Dr. Ann Skalka, Head, Laboratory of Molecular and Biochemical Genetics, Roche Institute of Molecular Biology; Professor R. C. Gonzales, Department of Electrical Engineering, University of Tennessee; Dr. George Martin, Institute of Dental Research, National

Institutes of Health; Dr. Gabriel Dover, Professor of Genetics, Cambridge University; Dr. Bruce McEwen, Professor, Rockefeller University; Dr. Peter Howley, Laboratory of Pathology, National Institutes of Health; Dr. Joe Larner, Professor of Pharmacology, University of Virginia School of Medicine; and Dr. J. S. Pagano, Cancer Center, Chapel Hill, N. C.

The College also helped the Graduate Student Association sponsor a lecture by Dr. Robert Weinberg, Center for Cancer Research, Massachusetts Institute of Technology.

Postdoctoral Fellows

The College sponsored 20 postdoctoral trainees for periods of six months or more. Travel funds were provided for five postdoctoral fellows. Each postdoctoral award is accompanied by a requirement that extramural support for subsequent training must be sought.

TABLE IV

<i>Department</i>	<i>No.</i>
Pathology	1
Pharmacology	3
Physiology	2
Neurology	2
Biochemistry	2
Medicine	2
Immunology	5
Ophthalmology	1
Biophysical Dentistry	1
College of Pharmacy	1

Summer Undergraduate Research Program

The enrollment in this summer program for college students was as follows:

<i>Student's Institution</i>	<i>No.</i>	<i>MUSC Department</i>	<i>No.</i>
University of Maine	1	Neurology	2
Tulane University	1	Biochemistry	3
Beloit College	1	Medicine	2
Univ. of Southern Miss.	1	Physiology	2
Canisius College	1	Ophthalmology	1
Erskine College	1	Pediatrics	1
Augusta College	1	Immunology	1
Univ. of North Carolina ...	1		
Furman University	2		
Swarthmore College	1		
Denison University	1		

The objectives of this program are to introduce students to biomedical research and acquaint them with opportunities for graduate study at the Medical University.

Federal funding was again received for a High School Minority Research Apprenticeship and a Short Term Research Training Program for health professional students.

Summer Research Faculty Fellows

The program was initiated this year with four full and two partial fellowships being awarded to college faculty of biology, chemistry, mathematics and physics departments to undertake a research project in an established laboratory at MUSC. These awards are primarily targeted at faculty of undergraduate colleges with limited research opportunities. However, applications from college faculty having close research interests with MUSC faculty were also considered.

An award of \$500 for laboratory supplies was also made to allow some flexibility in the project. Each project is designed to be completed in 10 to 12 weeks. The selection committee was chaired by Dr. Jerry Ondo. Awardees came from Clemson University, College of Charleston, Gardner-Webb College, Clark University, West Georgia College and the Medical College of Virginia. They worked with faculty in the Departments of Biochemistry, Biometry, Neurology and Pathology.

It is planned to expand the program, and efforts are under way to obtain funding from the S. C. Commission on Higher Education for faculty from South Carolina institutions.

Bioengineering Alliance

Negotiations are under way with the Department of Bioengineering at Clemson University to form a joint program with Clemson, the Medical University and the University of South Carolina. A proposal will be submitted to the S. C. Commission on Higher Education to formalize this program.

DEPARTMENT OF BIOMETRY

Faculty research continued to draw wide attention. These programs include: *Statistical Catastrophe Theory and Its Applications* (Cobb and Harrison). *Signal Analysis and Detection of Spinal Cord Injury and Determination of Cardiac Output through Image Processing* (Lam). *Survival Distributions, Stochastic Models, and Reliability* (Gross). *Pesticides and Heavy Metal Epidemiology* (Loadholt). *Hospital Evacuation* (Rust). *Neonatal Patient Information Systems* (Miller and Michel). *Cardiovascular Disease Epidemiology and Quantitative Studies of Cerebellar Afferent Circuits* (Gibson).

The faculty made 11 presentations before learned societies, and authored or co-authored 29 publications including a book and three abstracts.

In addition to its research and many teaching responsibilities, faculty of the Department serve as a University resource in the following consulting services:

Analog and Digital Modeling and Simulation, Bayesian Statistics, Bifurcation Theory, Biological Systems Modeling, Biomathematics and Modeling, Biomedical Engineering, Biomedical Computing, Biophysics and Theoretical Biology, Biostatistics, Cardiovascular Epidemiology, Cardiometrics, Catastrophe Theory, Clinical and Laboratory Computer Systems, Clinical Engineering, Competing Risks, Computers in Medicine, Diagnostic Models, Digital Signal Analysis, Discrete Distributions, Dynamic Systems, Ecological Models and Mathematics, Electrical and Biomedical Engineering, Environmental Biostatistics, Environmental Epidemiology, Epidemiological Models, Estimation and Tests of Hypothesis, Experimental Design, Fishery and Marine Statistics, Genetics, Genetic Modeling, Genetics Response Modeling, Health Services Research and Evaluation, Hospital and Patient Information Systems.

Also, Image Processing, Image Enhancement, Life Tables, Management Decision Models, Markov Processes, Mathematical Modeling, Medical Decision Models, Mathematical Sociology, Medical Information Systems, Micro-Computing, Multivariate Analysis, Neural and Physiological Modeling and Simulation, Nonparametric Statistics, Nonlinear Models, Nursing Biostatistics, Occupational Epidemiology, Optimization Procedures in Medicine, Patient Information Systems, Programming, Reliability, Sampling, Signal Processing, Sociological Models and Mathematics, Stability and Dynamic Models, Statistical Application in Thoracic Surgery, Stochastic Processes, Survival and Reliability Theory, Systems Analysis, Theoretical Foundations of Biometry, Theoretical Neuro-Biology, Population Biology, and Time Series and Geostatistics.

COLLEGE OF PHARMACY

The emphasis placed on high school visitations the past two years was rewarded this academic year with a 14 percent growth in the applicant pool and an increase of 23 entering B. S. students over the previous year. It brought the number of beginning students to 64 and helped raise the College's total enrollment to 164.

The Ph.D. program was formally organized and admitted its first student in the fall semester. Three additional students were admitted in January.

High honor came to Iota Chapter of Kappa Psi Pharmaceutical Fraternity. The group received the 1984 National Scholarship Tray Award

given annually to the chapter with the highest grade point average. In other student activities, the Rho Chi Honor Society in cooperation with the faculty visited area high schools to describe career opportunities in pharmacy.

The College concluded its search for a permanent chairman for the Department of Clinical and Institutional Pharmacy with the appointment of Dr. William A. Miller. Dr. Paul J. Niebergall was employed to direct the Pharmaceutical Development Center. He was formerly director of product development for Marion Laboratories. Eight other positions were recruited for during the year with seven being filled.

During the year, the College was fully accredited in its B. S. and Pharm.D. programs for another six-year period.

Nine members of the faculty were represented by a total of 14 articles in scientific or professional journals. Dr. Edward Sumner authored a text, *Handbook of Geriatric Drug Therapy for Health Care Professionals*, published by Lea and Febiger.

The faculty also presented 79 seminars throughout the state and nation and the College continued its extensive use of the Health Communications Network (HCN) for selected drug topics. Fourteen programs were aired through HCN and 16 programs were given in association with the Lowcountry Area Health Education Center.

The College's total extramural funding was slightly over \$159,900 and \$21,200 was received from various intramural sources. This was nearly triple the non-state funding received during 1982-83. Also, 84 students received financial aid in the total amount of \$257,444.

A \$9,000 gift, shared with the Department of Family Medicine, was received in January, 1984. In addition, \$750 was provided by Burroughs-Wellcome Corporation for scholarship purposes through the drawing of Charles Lacy's ('81) name during a national contest and \$5,200 was received from pharmaceutical companies to support various College programs.

Dr. John Hynes received two extra-mural research awards, one from the National Institutes of Health (NIH) in the amount of \$33,757 and the other from the World Health Organization in the amount of \$22,319. Additionally, he received a MUSC Summer Student Research Award (\$2,300) and a Post-doctoral award (\$6,000).

Dr. James Wynn was awarded two contracts, one from R. P. Sherer Company in the amount of \$16,995 and one from Reid-Provident for \$31,107. He also received a MUSC Summer Research Award (\$2,300).

Dr. Martha Sarasua received a MUSC research committee award of \$6,000. Dr. Richard Miller and Dr. Julian McGill each had MUSC Summer Student Research Awards in the amount of \$2,300.

Dr. Richard Crass received two contracts, one from Burroughs-Well-

come for \$34,550 and the other from Abbott Laboratories for \$2,667.50.

Dr. Arnold Karig was awarded a Smith, Kline and French award to improve faculty computer literacy in the amount of \$18,534.

The Golden Mortar and Pestle Award was presented to Dr. George Spooner as outstanding teacher for 1983-84.

COLLEGE OF NURSING

In a year of many changes, major among them was the resignation of Dr. Marcia Curtis from the Dean's position, a post she had held and capably filled for 15 years. Other notable developments, further described in relation to individual program summaries, included implementation of the first phase of the revised undergraduate curriculum, internal reorganization of the Undergraduate faculty, the design and approval of the second major in the Graduate Program, expansion of the Nurse-Midwifery Program, and the decision to terminate the Winthrop Satellite offering in 1987.

National League for Nursing

National League for Nursing reaccreditation of the Baccalaureate Degree program and initial accreditation of the Master of Science program were scheduled for fall 1984. Significant progress on the required self-study report was achieved; however, the major administrative change in the College prompted a request for a delayed review. Presently the College is anticipating the site visit in March, 1985.

Undergraduate Program

Progress on the curriculum revision, self-study and reorganization was significant. In addition, the Undergraduate Faculty participated extensively in College of Nursing and University committees and in activities with students.

Following were some of the faculty accomplishments in the areas of research, scholarly work and service: Ten faculty members participated in on-going research projects; one faculty member applied as a co-investigator for a \$1 million grant to conduct research on "Habit of Health"; 10 articles submitted by faculty were published; three articles or book chapters submitted for publication were accepted; and 15 faculty members participated in 30 workshops.

Major accomplishments included the design of a common clinical evaluation tool; development and implementation of Level II of the curriculum; development of Levels III and IV of the curriculum; revision of the Registered Nurse Track; and revision of academic policies.

Francis Marion Satellite Program

The year was one of major growth at the satellite. Two additional full-time faculty members were hired, bringing the total to four full-time members. They taught all required nursing courses and provided student advisement for RN students and Francis Marion College pre-nursing students. The faculty also traveled to the College of Nursing in Charleston to participate in curriculum work during this self-study period. They provided major support for the development of the RN curriculum which is in congruence with the revised generic curriculum.

Student recruitment was a major priority for the satellite. Questionnaires were recently mailed to approximately 500 registered nurses in the Pee Dee area to determine their interest in baccalaureate education. The questionnaire provided space to request information regarding the satellite program.

The faculty of the satellite will use 1984-85 as preparation time for implementing the revised curriculum. The curriculum plan is currently going through the proper channels for approval. Implementation of the revised RN curriculum will begin in Fall 1985. Students admitted in Fall 1984 will be the last ones admitted under the current curriculum policies.

Winthrop Satellite Program

The satellite seems to have stabilized in terms of student enrollment and budget. Because students were consistently drawn to the program from North Carolina, the decision was made to phase out the offering over a three-year period, with the last class entering in Fall 1984.

The satellite faculty was active in planning the new curriculum with the Francis Marion and Charleston RN faculty. The group worked well together and developed a proposal for the RN track which included two new courses, plans for validation, admission requirements, and degree requirements. The proposal was forwarded to the Curriculum Committee.

The past year was a full one with considerable time devoted to curriculum development and understanding the new curriculum in the generic base. Faculty energy was devoted to professional activities such as seeking alternatives for students who wish to pursue their education in the north central region of South Carolina after the last class is admitted to the MUSC program in Fall 1984.

Graduate Program

At the beginning of the 1983-84 academic year, the Graduate Program initiated a revised 11-month curriculum in Medical-Surgical Nursing for the first time. This curriculum is designed to prepare clinical nurse

specialists in medical-surgical nursing with emphasis on the care of a selected population of adults.

In addition to the work in this major, planning for a major in Administration in Nursing Services to open in Fall 1984 was completed. A major event during the academic year was approval of this major in February by the South Carolina Commission on Higher Education.

Curriculum planning continues as faculty consider the selection of a new clinical major to be opened in August, 1985. Their efforts are in compliance with the Medical University Board of Trustees' approval of a motion to support development of all clinical majors at the graduate level by 1990.

Other efforts included contracting with administrators of Nursing Services for graduate residency preceptorships and conducting a state-wide survey to facilitate future curriculum development.

Faculty accomplishments included seven publications; more than eight articles under editorial review; five ongoing research projects; more than 15 presentations to outside groups, and numerous workshops.

Nurse-Midwifery Program

On July 1, all nurse-midwifery positions were budgeted through the College of Nursing, including four classified (one of which is reimbursed by the Department of Health and Environmental Control (DHEC)) and nine full-time faculty positions. Recruitment efforts to fill three unfilled positions were successful by September.

In addition, two DHEC clinics in Orangeburg County were added to the clinical schedule to meet the needs of pregnant women. While temporarily an additional burden to the service, these clinics later provided an excellent resource for student learning experiences.

The training grant for the "Enhancement of Nurse-Midwifery Education" was fully funded for three years beginning in October, 1983. The grant provided for two faculty members and one staff in 1983-84. All learning modules were placed on the word processor and beginning efforts were made to develop a data base to analyze data accumulated over 10 years of nurse-midwifery and to evaluate services provided by both certified nurse-midwives and students.

All clinical agencies indicating interest in nurse-midwifery during grant development were visited and evaluated as possible clinical sites. Two new sites were subsequently opened, an extended clinic in Moncks Corner for adolescents needing antepartal and postpartal/family planning care, and a new clinic in Summerville to provide maternity services.

Eleven student nurse-midwives completed the program and qualified to sit the national certifying examination. The expansion grant allowed an increase in enrollment and 15 registered nurses began the program in

January, 1984. The larger group necessitated some changes in teaching method in order to maximize use of clinical sites and faculty expertise. Components of the management process were distilled from major clinical modules and presented to students as an introduction to the nurse-practitioner role. All revisions and alternatives will be thoroughly evaluated for effectiveness and efficiency.

Next year, renewed effort will be placed on developing and implementing a system of peer review, not only to provide collegial support and to document quality of practice, but to substantiate the benefits and cost effectiveness of nurse-midwifery care.

Nurse-Midwifery at the College of Nursing enters its second decade of service in 1984-85.

COLLEGE OF ALLIED HEALTH SCIENCES

The College operated 11 baccalaureate, one master's and two advanced certificate programs during the reporting period, serving approximately 400 students. In addition, it continued to contribute heavily to the clinical portions of lower division health curricula offered by the local technical college, serving approximately 250 students in these programs.

Outreach evening hours efforts in the Piedmont region of the State continued to prepare students at the graduate level. Similar "trial" graduate courses were offered for the first time in the Pee Dee region due to numerous requests from health careers workers in that area. Initial contacts and preparations were made towards extending post professional baccalaureate degree offerings to technical college graduates of health programs in the Greenville area, with "trial" courses scheduled for fall 1984. All extension efforts were operated on a cost-recovery basis and did not require additional University or State funds beyond basic costs at the Charleston campus.

Board, registry and certification exams involving credentialing in the various professional areas generally ranged above the 50th percentile on a national basis, with several groups finishing at the 75 percentile or above. Graduates of the various curricula had a first time passing rate for these national level exams of approximately 94 percent. Graduates generally reported strong satisfaction with their training and employers noted that they were well prepared on a comparative basis.

Statewide recruitment was conducted at colleges and universities throughout South Carolina. As the final professional phase of the various upper division health curricula, the College effectively operates as an extension of all of these other postsecondary educational units. The number of interested individuals who made formal inquiry rose to approximately 1,700, resulting in approximately 500 actual applications for 197 class slots. As the only major upper division clinical unit in the

State, the College remained a very cost effective component of higher education both in South Carolina and the nation.

Faculty remained active in educational, extension and research endeavors. As a clinical training-oriented health professional group, it concentrated on providing sound, up-to-date training, resulting in fairly heavy contact teaching loads. Numerous continuing education and consultation activities occupied the next major portion of faculty time. Research endeavors were generally collaborative in nature with other MUSC faculty or with student oriented research projects. A number of faculty performed high level assignments in local, state and national professional organizations. Included were several members of boards of directors or their equivalents and one national president of an organization with more than 23,000 members.

The College participated in a number of international educational projects over the year. One faculty member spent nine weeks in Burma as a consultant in the medical laboratory area, supported through the Asian Development Bank. A visit to Thailand by the Dean for several weeks was arranged as an extension of an ongoing Royal Thai Air Force hospital construction project already under way with MUSC support. Future cooperative educational exchanges in allied health technologies are projected once the hospital is completed.

In summary, the College of Allied Health Sciences had perhaps its most productive year in its history and has made preparations for additional advances.

UNIVERSITY STUDENT PROGRAMS

Student Organizations

The MUSC Student Government Association (SGA) continued to maintain high quality in its programs, which included a five-sport intramural program, all-university social events, an excellent weekly film series, and activities designed to promote student interaction among colleges and faculty. Additionally, the group established new goals and a new direction.

During the year the SGA sponsored two off-campus leadership training workshops, bringing in outside resource people, and scheduled another workshop for early fall for the new campus leaders.

The students entered with renewed dedication into service and community projects, and sponsored two very successful Red Cross blood drives. Also, the SGA and all of the college student governments on campus collaborated in a pre-Christmas canned food drive that resulted in approximately a ton of food for the Salvation Army to distribute. The group has established a committee to coordinate student service and community projects with a specific charge of planning a significant fund

raiser for the United Way for fall 1984.

Various other student organizations with professional service orientations continued to flourish. Especially noteworthy was the work of the Student Health Coalition and Superhealth 2000. The Student Health Coalition, an interdisciplinary group of students under the supervision of physicians and nurses, conducts health screening and education programs in rural areas throughout the state. This year almost all of their funding came from a Foundation Grant. This program received excellent media coverage and positive feedback from the people in the communities who housed the student workers. Superhealth 2000 is an interdisciplinary campus group which, with the support of faculty members and the Office of Educational Services, sends students into the community to make presentations on health topics to groups of all ages in public schools, churches and other organizations. They cover a variety of topics from smoking, alcohol and drug abuse and sexually transmitted diseases to diet, exercise and healthy life styles.

Another activity was the student talent show which featured some 20 acts presented to a full house. The Variety Show will be continued as an annual event.

Student Programs Office

New activities and achievements of the Student Programs Office over the past year included: (1) computerization of the housing locator service; (2) a fall poster art sale to provide students with inexpensive, quality art for themselves and as holiday gifts as well as to raise money to help fund the Brown Bag Concerts; and (3) arrangements to distribute free to students a card entitling them to discounts at a number of local businesses.

The demand for counseling services continued to be on the upswing, whether from increased need or an increased awareness of the service.

A small ad hoc group of faculty members, administrators and students met regularly under the leadership of Ric Jones (psychiatrist in Family Medicine) to review the medical school experience and to develop specific recommendations for activities or programs to enhance this experience. Some of the activities resulting from this committee's work were: (1) a presentation by Dr. Jones at the College of Medicine's Spring Department Chairmen's Retreat; (2) a medical specialization testing program (for juniors) to be implemented in September, 1984; (3) a clinical orientation program organized by the Student Council of the College of Medicine and AOA (College of Medicine Scholastic Honorary) for students entering their clinical rotations; and (4) the formation of a standing committee whose focus is on the student learning environment.

Staff in the Student Programs Office participated in a variety of working conferences for professional development and throughout next

year will take part in workshops conducted by Fenwick Hall in the area of identifying and counseling students with alcohol and drug abuse problems.

Of special note was the high priority that University Administration attached to two student affairs goals, the construction of a student center/preventive medicine-wellness center, and efforts to attract scholarship and loan funds.

With shrinking federal scholarship and loan funds, student employment is taking on new importance. The director of the Student Programs Office increased efforts to identify potential campus work opportunities and worked with faculty and staff to establish new jobs for students. She also worked with students to match special talents with university needs. It is estimated that 50 percent or more of the students work while attending school.

Student Financial Aid

A primary goal of the Financial Aid Office this year was to computerize the financial aid process in regard to tracking student records, packaging aid awards, and preparing fund records. This goal was met and enhancements to the current on-line systems are in progress. By fall 1984, a telecommunication system for on-line processing of guaranteed student loans will be implemented. The staff is currently working with the U. S. Department of Education to implement a system of terminal to terminal transactions for reporting data on Federal Campus-Based programs. With the support of the Computer Center, the office has become one of the first in the country to implement a computerized certification system for the Guaranteed Student Loan Program. The gains in this area over the past two years have greatly increased the efficiency of services to students.

In the area of professional development, the director is serving a three-year elected term as the Southern representative on legislative affairs to the Federal Aid Programs Committee of the National Association of Student Financial Aid Administrators, and the assistant director was elected Secretary of the South Carolina Association. The staff continues to serve as an informational resource for guidance counselors in the state, pre-medical advisors and other college counselors, the Office of Minority Affairs, and members of the university community.

The Financial Aid Office coordinated and awarded aid to 1,539 students in the amount of \$6,149,128 during the academic year as follows:

	<i>Totals</i>
Grants	\$ 604,389
Public	\$392,151
Other	\$212,238

Loans	
Cash Repayment Only	3,652,205
Cash or Service Repayment	283,049
Scholarships	88,418
Student Employment	
Federal College Work Study Program	138,445
Other Institutional	125,927
Additional University Employment Not	
Classified Nor Included In Above Data	698,531
Graduate Assistantships/Traineeships	326,000
Tuition/Fee Revenue Military and	
National Health Corps Scholarships	232,164
Total Dollars	\$6,149,128
Total Number of Loans and Awards	
2,372	
Unduplicated Number of Recipients	
1,539	

With improving computer systems, a major goal is to have notification-of-aid awards for 1985-86 available to students by July 1, 1985.

UNIVERSITY REGISTRAR AND DIRECTOR OF ADMISSIONS

Admissions systems for all six colleges have been placed on the University applicant data base. Further, extensive work was done in expanding the data base for the College of Medicine. Weekly printouts of statistical information and applicant ranking in several formats were made available. This service is now available to all six colleges.

The Colleges of Dental Medicine, Nursing and Pharmacy have been assigned a staff person to support admissions and other activities relating to this office. These persons are responsible for data entry for all applicants to those colleges and for preparing materials for admissions committees.

Records/Registration/Statistical Reporting

Services offered by the student records section have been improved and expanded. A major thrust in this area has been in the preparation of inactive files for microfilming. It is anticipated that in 1984-85 all inactive files will be on microfilm.

The timely reporting of student grades has been accomplished. Final grade reports were issued to students in all colleges within one week of the end of each term.

General registration continues to be accomplished via pre-registration. A University registration "fix-up" period for each term has been coordi-

nated by this office. All functions are centralized in the study room of the Alumni Memorial House for an appropriate period. These functions include the Bursar, Student Financial Aid, Student Accounts Receivable, Public Safety, Student Insurance, Student Pictures, Parking, and the Registrar. This office has also coordinated orientation activities for new students.

Statistical reporting has taken on new dimensions with the advent of formula funding. Several new S. C. Commission on Higher Education reports were prepared for the first time. The Assistant Director for Records spent approximately two weeks in the University Accounting Office setting up the system for credit hour production to be used in formula funding calculations.

In view of formula funding and its dependence on credit hour production, the Registrar reviewed curricula with curriculum representatives from each college to ensure that all courses taught are being accounted for and assigned appropriate credit. Several courses were identified as being unaccounted for and/or offering inappropriate credit, resulting in increased credit hour production.

Expanded statistical reporting is now possible due to the acquisition of three personal computers. When the fiber optic equipment is installed, the student and admissions data bases will be compatible with other personal computers in the Finance and Administration areas for ease in exchanging data and reports.

Academic Publications

The 1984-86 University Catalogue was published and delivered in early May. A staff member making use of newly acquired Word/Text processing equipment was able to prepare camera-ready copy. This along with the reduction in the number of pages resulted in the printing of 8,000 more copies for \$8,000 less than the last published catalogue.

Individual colleges have requested specific-purpose academic brochures. These along with preparation of recruitment materials will be priority items during 1984-85.

Classroom Space Scheduling

A highly sophisticated scheduling system has been developed with the capability of scheduling space for any variety of time and the capacity to incorporate all classrooms and any other designated space. The system also has the capability of expanding into numerous other areas.

The system will be of special service in accounting for space utilization required by the Commission on Higher Education and for internal use by Public Relations, Public Safety, and Physical Plant.

Continuing Education

Support of the Division of Continuing Education has been refined. New programs have been developed to provide additional information for the Department of Continuing Education. A standardized reporting system and credit processing have been coordinated with various departments. The cost of computer support for the Division of Continuing Education represents approximately 15 percent of the overall computer expenditures for the office. The total number of participants on the data base is approximately 15,000 and the total number of programs is approximately 850.

Student Recruitment

Invitations to represent the University to student groups on several campuses were honored. It is estimated that in eight off-campus visits at least 350 students were seen and were given information regarding educational offerings at MUSC.

Extensive planning for the recently approved student recruitment program was conducted so that with budget approval, implementation could begin.

UNIVERSITY ENROLLMENT

1983-84

Post Doctoral Fellows, Residents, and Interns	
Post Doctoral Fellows	32
Residents and Interns	
Residents and Interns — Medicine	372
Residents — Dental Medicine	12
Residents — Pharmacy	6
TOTAL — MUSC Residents and Interns	390
S. C. Consortium Hospital Residents and Interns	
Anderson*	25
Charleston*	43
Columbia	126
Florence**	18
Greenville	101
Greenwood**	10
Spartanburg	52
TOTAL — S. C. Consortium Hospital Residents	
and Interns	332
ON CAMPUS — Residents and Interns	390
OFF CAMPUS — Residents and Interns	332
TOTAL — Post Doctoral Fellows, Residents and Interns	754

*Included in MUSC Residents

**Statewide Family Practice Residency System only

College of Graduate Studies

Doctor of Philosophy	76
Master of Science	19
TOTAL	95

College of Medicine

First Year	164
Second Year	149
Third Year	163
Fourth Year	152
Special	1
TOTAL	629

College of Dental Medicine

First Year	49
Second Year	54
Third Year	54
Fourth Year	54
TOTAL	211

College of Pharmacy

Doctor of Pharmacy	
First Year	11
Second Year	13
TOTAL	24

Baccalaureate Program

Third Year	64
Fourth Year	39
Fifth Year	35
TOTAL	138
TOTAL — College of Pharmacy	162

College of Nursing

Master of Science in Nursing	13
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Baccalaureate Program

Second Year	101
Third Year	92
Fourth Year	121
TOTAL — Baccalaureate	314

Nurse Midwifery (Certificate Program)	11
TOTAL — College of Nursing	338

College of Allied Health Sciences

Master in Health Sciences	78
Special Students — Master in Health Sciences	14
TOTAL — Master in Health Sciences	92

Postbaccalaureate Certificate Program	22
Baccalaureate Programs	266
Special Student — Baccalaureate	1
TOTAL — Baccalaureate	267

Joint Programs with Trident Technical College

Associate Degree	200
Certificate Programs	65
TOTAL — Associate and Certificate	265
TOTAL — College of Allied Health Sciences	649

Non-Degree Program

Unclassified	47
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ENROLLMENT SUMMARY

Post Doctoral Fellows	32
MUSC Residents and Interns	390
Consortium Hospital Residents and Interns	332
TOTAL — Post Doctoral Fellows, Residents, and Interns	754

MUSC

Graduate Studies	95
Medicine	629
Dental Medicine	211
Pharmacy	162
Nursing	338
Allied Health Sciences	384
Joint Allied Health Sciences Programs	
w/Trident Technical College	265
Non-Degree Program (Unclassified)	47
TOTAL Colleges	2,131
GRAND TOTAL	2,885

DEGREES AND/OR CERTIFICATES CONFERRED

July 1, 1983-June 30, 1984

House Staff

Certificate

Residents — Medicine	119
Interns — Medicine	21
Residents — Dental Medicine	4
Residents — Pharmacy	6
S. C. Consortium Hospital Interns and Residents	112
TOTAL	262

Graduate Studies

Doctor of Philosophy	15
Master of Science	7
TOTAL	22

Medicine

Doctor of Medicine	154
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Dental Medicine

Doctor of Dental Medicine	54
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Pharmacy

Doctor of Pharmacy	12
Bachelor of Science	31
TOTAL	43

Nursing

Master of Science in Nursing	3
Bachelor of Science in Nursing	118
Nurse Midwifery (Certificate)	11
TOTAL	132

Allied Health Sciences

Master in Health Sciences	30
Cytotechnology	6
Dental Hygiene	13
Extracorporeal Circulation Technology	5
Medical Record Administration	12
Medical Technology	18
Occupational Therapy	19
Physical Therapy	28
Radiologic Technologies	20
Respiratory Therapy	4
Anesthesia for Nurses (Certificate)	9
Cytotechnology (Certificate)	1
TOTAL	165
GRAND TOTAL	832

RESEARCH AND SPONSORED PROGRAMS

Despite ever tightening funding support from federal and private sources, total extramural support of research and sponsored programs grew by \$200,000 to a new high of \$11,619,968. This sum served to generate approximately \$1.7 million in indirect funds for the University. The research support included \$1,350,000 of VA funding for MUSC faculty with appointments at the Charleston VA Medical Center.

The most dramatic increase continued to be from the corporate sector, whose support has increased nearly tenfold over the past six years. Corporate, along with foundation and voluntary health organization backing, now accounts for 24 percent of all extramural support. The average at most major medical schools is from 10 to 15 percent.

For the first time a new line, labeled "royalties", was added to the research report. Income was received from the licensing of a patent developed by University scientists. The licensing was accomplished through the Drug Science Foundation. Based upon University policy of incentive, part of this initial income of \$5,687 was returned to the inventors.

The growing health in University research is accounted for by a doubling of projects over the last five years to 355 receiving extramural support. More than 30 percent of all full-time faculty are principal investigators for outside funding. In the College of Medicine the ratio is over 40 percent.

An indicator of the magnitude of clinical investigation on campus is the number of individual research projects involving human subjects. This number exceeded 680 this past year. These projects are being conducted by more than 250 principal investigators. With 625 full-time faculty, these figures illustrate that approximately 40 percent of the total faculty is conducting clinical investigations.

During the year, a new Assurance was negotiated with the U. S. Department of Health and Human Services. This Assurance outlines the methods used by the University through the Institutional Review Board for Human Subjects (IRB) to evaluate and review all protocols involving human subjects. The approval of this Assurance was effective March 1 for five years.

One of the most important factors in the development of research on campus has been the functioning of the University Research Committee. This committee met six times, reviewed 103 applications, and made 63 awards involving 19 different departments. A total of \$309,788 was awarded to the projects. Over the past four years, more than 50 percent of those projects funded from institutional support through the University Research Committee subsequently obtained extramural support for their research. The extramural funding was five times that of the institutional

support. Institutional support for research development is therefore a sound investment.

Upon recommendation of the University Patent Committee, an ad hoc University committee was appointed by the President to draft a new policy for Intellectual Property Policies and Procedures. With the assistance of outside consultants, this new policy was developed and recently received approval by the Board of Trustees. It brings into one policy the handling of all intellectual property, i.e., inventions, copyrightable works and other tangible results of research. The new policy is now being implemented on campus.

In the course of the year, the University entered into two more international associations. In addition to the previous bilateral cooperative agreement with Alexandria University of the Arab Republic of Egypt, the University signed bilateral agreements with the University of Valle, Cali, Colombia, and the Kum Klao Foundation, Bangkok, Thailand. All three agreements have resulted in the exchange of faculties during the year. The projects with Alexandria University and Valle University have identified research topics and activities that will be implemented when extramural funding becomes available.

The project with Colombia was launched with a visit to the Medical University campus by Colombian Ambassador and Mrs. Alvaro Gomez, and Drs. Rodrigo Guerrero and Oscar Bolanos, respectively the President and the Dean of Health of the University of Valle. As a result of the cordial meeting, the Medical University and the University of Valle have identified some 20 priority areas for bilateral cooperation in research and training. Most of the dozen or so faculty exchanges in 1983-84 between Colombia and South Carolina have been funded by Partners of the Americas, a private, non-profit organization.

The project with Kum Klao Foundation has generated six exchanges to date. Three Thai physicians have come to MUSC to observe and train and three Medical University faculty members have visited Bangkok as guests of the Royal Thai Government.

OFFICE OF EDUCATIONAL SERVICES

In October the Office established an Educational Test Scoring Center available for the Student Examination Evaluation Program (SEEP) and for analysis of data collected on optical scan data sheets. In nine months, more than 500 examinations were processed. This service is provided upon request. Workshops and seminars were available to the faculty of every college to help them utilize the information from the test report.

Also in October the Educational Computer Laboratory was established, consisting of four versatile computers and ancillary equipment.

The laboratory has been used for instruction in ten courses. In addition,

the use of the laboratory by individuals has steadily increased.

The staff assisted the faculty in the development of 22 videotaped instructional units, several units including more than one program. It also assisted the S. C. Lung Association, Medical University Hospital Volunteer Services, Department of Personnel Services and the Division of Continuing Education in developing audiovisual instructional/training materials. There were 20 slide-tape and slide-monograph programs developed for four courses.

The Office continues to participate in the Health Sciences Consortium.

Substantial amounts of time were committed to the support of the Curriculum Committees and their subcommittees in the Colleges of Medicine, Dental Medicine, Pharmacy and Nursing. For Dental Medicine, a major curriculum evaluation and review was conducted. The same activity took place in the College of Pharmacy.

Division of Audiovisual Production

The Division exceeded its budgeted revenue goal by \$6,974, the total revenue generated amounting to \$160,974. The staff was increased by one full-time employee, and three photographic technician positions were upgraded to staff photographers.

New equipment purchased during the year included an Enterprise processor, Fotax compound table, R. C. processor and Gemini printer for the Apple.

Special projects undertaken included President James B. Edwards' installation, commencement exercise, several major surgical films, surveillance for public safety, personnel orientation slide/film program, State Ports Authority poster exhibit and layout of Auctus, the alumni bulletin.

The Illustration and Design Section earned two awards in the Charleston Advertising Federation competition, a first and third place in the print material category.

LIBRARIES AND LEARNING RESOURCE CENTER

The Medical University Library was awarded a Resource Grant in the amount of \$324,133 by the National Library of Medicine to establish the South Carolina Health Information Network (SCHIN), the first statewide computerized biomedical information network in the country. SCHIN will provide access to biomedical literature for more than 20 community hospitals as well as state and federal health related agencies in its second year of development. In the third year, any health practitioner in South Carolina, regardless of geographic location, may access the system via personal computer. While MUSC is the grantee institution, the three-year project was developed as a joint effort by the MUSC and University of

South Carolina School of Medicine Libraries.

A total of 80,626 books, journals and audiovisual items circulated during the fiscal year. The reference staff answered 7,529 extensive and ready reference questions and a total of 4,272 computerized literature searches was executed on the NLM, BRS, DIALOG, ISI BIOMED and CASSIS data bases, a 12.3 percent increase.

The interlibrary loan office provided 8,950 monographs, journals and photocopies of journal articles to users throughout the state and the nation, a 2.7 percent increase. For the first time, MUSC provided more items for out-of-state borrowers (52.2 percent) than in-state borrowers (47.8 percent). A total of 1,970 items was borrowed for MUSC patrons which is an increase of 13 percent.

Requests for assistance to Extension Services continued to decline, the direct result of the adoption of a fee for service policy by the Library, and the increased ability of hospitals in South Carolina to provide services on a local level.

Of the \$1,107,029 allocated for library expenditures in 1983-84, \$214,000 or 19.3 percent was from indirect cost monies received on institutional grants. While these monies may be considered institutional dollars, they are not direct state appropriations for library operations, and future support from this quarter will be dependent upon the vagaries of the grant funding process.

LIBRARY AND LEARNING RESOURCE CENTER STATISTICS 1983-84

Holdings:

Total Holdings°, June 30, 1983		151,592
Added, 1983-84	5,342	
Withdrawn, 1983-84	1,364	
Total Holdings°, June 30, 1984		155,570
Periodicals & Serials Currently		
Received (2,264 + 376)		2,640

° Monographs, bound journals, audiovisual packages

Number of Interlibrary Loan Transactions:

Incoming	1,970	
Outgoing	8,950	
Total		10,920

Circulation:

Journals	35,542	
Monographs	27,283	
Audiovisuals	17,801	
Total		80,626

Budget:

State Appropriations	893,029
Indirect Cost Monies	214,000
Total	\$1,107,029

WARING HISTORICAL LIBRARY

The Waring Historical Library completed its participation in the Eighteenth Century Short Title Catalogue of British imprints conducted by Louisiana State University and the North American Imprints Program conducted by the American Antiquarian Society. The Library had 622 titles and 682 volumes of 18th century British imprints and 87 titles with 86 volumes of North American imprints.

In the conservation area, Vapor Phase Deacidification of the books is a continuing process and will take many years to complete. Betty Newsom of the library staff rebound or rebaked 57 books this year, and 27 books were sent to Mr. C. Allan Carpenter in Massachusetts for rebinding. The latter was accomplished with the help of Waring Library Society funds.

The Library was host to 65 researchers having such interests as St. Francis Xavier Infirmary, the Cannon Street Hospital and Training School for Nurses, pregnancy and childbirth in the Antebellum South, smallpox in Colonial America, pediatrics in South Carolina, black midwives, and also a number of 19th century physicians such as J. J. Chisolm, Louis Agassiz, J. C. Nott and Lucy Hughes Brown. Sixty-four letters of inquiry were answered, and over a hundred telephone requests answered with material furnished in photocopy or photographs to 75 persons.

The Waring Library, in cooperation with the cover editor of the *Journal of the South Carolina Medical Association* and the photography department of the Medical University, continued to provide photographs for the covers of the *Journal*. Exhibits were changed periodically in the cases in the library and in other buildings of the University. The library participated in Parent's Day and Old Grads tours, and conducted tours for incoming students. Occasional groups of high school students toured the library also. At the request of the president, a survey of all portraits in the Medical University was conducted and included information on location, artist, and date of painting.

On his trip to England last fall, the director was able to pick up a few books which have become valuable additions to the Waring Library collection, Kirkpatrick's *Essay on Inoculation* 1743, and Beatty's *Authentic Narrative of the Death of Lord Nelson* 1807, to name a couple. South Carolina materials added to the collection this year include 19th century pamphlets by S. H. Dickson, John Bachman, J. C. Nott, T. G. Thomas and Maurice Moore, and two books by J.L.E.W. Shecut.

Gifts to the library included more than 80 books and interesting old

photographs from the library of Dr. W. Cyril O'Driscoll, former professor of anatomy at MUSC, a gift of Dr. J. Manly Stallworth. Dr. Stallworth gave the library also books from his own library as well as a wooden examining table and stool of the 1930's and the valvulotome which Dr. Horace G. Smithy, Jr., used in his pioneer heart surgery in the 1940's. Early nylon and orlon grafts, homografts, Hofnagel valves, and other instruments pertaining to the heart surgery of the late '40's and early '50's were a part of his latter gift.

The library received also a doctor's bag of the 1920's from Dr. Thomas A. Pitts of Columbia, a monocular Bausch and Lomb brass microscope in a wooden case, a sphygmomanometer in a wooden case, two daguerreotypes, and other museum artifacts. A complete listing of the Library's acquisitions and gifts is published semiannually in *Library Notes*.

The Waring Library Society ended its sixth year with more than 250 members of whom 56 were student members. An Essay Contest for students was sponsored again this year, and two lectures in the history of medicine were held. A reception to honor a medical student with an exhibit of his pen and ink drawings was an extra activity of the Society, as well as a wine and cheese seminar for student members. The Library sponsored also a lecture to commemorate the centennial of the birth of Dr. Archibald Rutledge, first poet laureate of South Carolina. Dr. James K. Ahern of Ridgefield, Conn., spoke on "William Carlos Williams: Physician-Poet."

The director, Dr. W. Curtis Worthington, Jr., continued his series of biographical sketches of 19th century members of the faculty, which have been published in *The Catalyst*. He has been preparing also two papers, one a bibliography of the antebellum handwritten theses in the library, and the other on the first "town and gown" controversy in 19th century Charleston. Dr. Worthington attended the annual meeting of the American Association for the History of Medicine in San Francisco in May. The curator attended this meeting also, as well as the Association of Librarians in the History of the Health Sciences meeting the day before the AAHM sessions began.

STUDENT-EMPLOYEE HEALTH SERVICES

A substantial drop in the number of injuries and illnesses was recorded during the year. Injuries to employees decreased from 2,314 the previous year to 903, with lost time accidents also decreasing from 149 to 130. Student illnesses declined from 4,396 to 4,040 and employee illnesses from 2,537 to 2,097. There was a climb in infectious diseases among students, however, from 569 to 673.

Under a new policy of referring employees with non-job related medical problems to the University Diagnostic Center or private physi-

cians, patient visits declined from 18,993 to 12,480. The decline occurred in after hours and weekend visits as well as for usual clinic hours.

For the first time all students were required to carry hospital health insurance.

Health Services performed 1,006 pre-employment physicals and administered 966 tuberculin skin tests. The Hepatitis vaccine was given to 126 students and employees, the cost of the series of three injections being \$99 per person. Several departments provided coverage for high risk employees.

A physician's assistant was hired to assist in performing the more than 1,500 Office of Safety and Health Administration (OSHA) and pre-employment physicals. Also, a dietitian joined the staff part-time to develop weight control programs in conjunction with the employee wellness program.

On June 29 Health Services relocated from the first to the second floor of the University Diagnostic Center. With the move came the acquisition of additional space on the third floor for administrative functions.

The following publications issued from research activities:

Bjorksten, O., Sutherland, S., Miller, C. and Stewart T., "Identification of medical student problems and comparison with those of other students." *Journal of Medical Education*, Oct., 1983, pp. 759-767.

Bjorksten, O., Miller, C., Sutherland, S. and Stewart, T., "Perceptions of Dental Student Problems." *Journal of American College of Dentists*, Fall issue, 1983, pp. 11-15.

Sutherland, S., Bjorksten, O., Stewart, T. and Miller, C. "Identifying Pharmacy Student Problems." *American Journal of Pharmaceutical Education*, Vol. 48, Spring 1984, pp. 57-61.

Seymour, W. W. "Campylobacter in a Student Health Service." *Journal of the South Carolina Medical Association*. Accepted for publication.

Thomas, James C., Moore, Ann J., Quails, Phyllis E., "The Effect on Cost of Medical Care for Patients Treated with an Automated Clinical Audit System." *Journal of Medical Systems*, Vol. 7, No. 3, 1983.

MEDICAL UNIVERSITY HOSPITAL

The Hospital reached many of the goals it had set for the fiscal year. As construction continued on the Hospital's East Wing Children's Medical Center, the structure began to slowly take the shape of an ultra-modern specialized health care facility. Several new projects were initiated and completed in an effort to meet patient needs and keep pace with the structural requirements of rapidly changing medical care technologies. Of the many areas of Hospital operations reaching their goals, the accomplishments of five are highlighted below.

Hospital Marketing

In December, 1983, the staff position of Administrative Director for Hospital Marketing was created. An early priority in the program has been market research, the foundation on which to build a good data base so that plans and strategies can be solidly formed. A market research consulting firm specializing in health care was awarded a contract to survey all licensed physicians in South Carolina to determine their perceptions and attitudes towards the Hospital, why they are formed, their referral patterns, and the criteria a physician uses when selecting a referral hospital. A hospital market audit is in progress and additional surveys are planned.

As a tertiary care referral center, the Hospital has a key market segment to target, that of the referring physician. With the cooperation of the Clinical Staff, work is in progress to expand the present Clinical Science Directory into a Directory for Referring Physicians. This will serve as a functional as well as a promotional tool.

In the area of Patient Relations, a patient education video tape for the Storm Eye Institute is being developed "in-house" and will be shown on television sets in patient rooms in conjunction with tapes on specific ophthalmological procedures.

Medical Records

Transcriptionists in the Medical Records Department became the first State employees to be compensated using an incentive pay plan. The incentive pay plan was established to increase efficiency and reward employees for exceptional productivity.

Pharmaceutical Services

A new director was recruited to head the Department of Pharmaceutical Services. Subsequently, three new assistant directors were recruited to assist in further developing and expanding the pharmaceutical services offered within the Hospital. In addition, reclassifications were approved for pharmacists and pharmacy technicians to make Medical University Hospital salaries more competitive in the marketplace.

Several steps were taken to improve operating efficiency within the Pharmaceutical Services Department. Pharmacy satellites were completed on the fifth and sixth floors of the Hospital. These space changes have improved both operational efficiency and working conditions of employees in the Department. Pharmacy purchasing systems were also analyzed and, as a result, a number of changes will be made to obtain more competitive prices and to reduce pharmacy inventory levels. Also, a drug formulary was published to promote the use of therapeutically efficacious, safe and cost-effective drugs in the Hospital.

Nursing

Improvement of the quality of patient care was accomplished by implementation of a complete patient classification, staffing, and scheduling system and vigorous recruitment and retention techniques.

One measure of quality of nursing care is represented by the educational preparation of the nursing staff. Because Medical University Hospital is a tertiary health care referral center with multiple intensive care units, emphasis has been placed on recruiting nurses with extensive educational preparation. As a result, the number of registered nurses has increased twofold in the past decade while, simultaneously, the number of licensed practical nurses and nursing assistants has decreased.

The Department of Nursing has aggressively pursued the development and implementation of a successful Patient Classification System to measure acuity in nursing care required to care for an individual patient. By determining nursing related time standards, the Department is now translating this information into the amount of nursing time required to care for all patients in a patient care unit. This information is then used to determine the number and composition of staff members needed to staff each unit efficiently and effectively.

Significant accomplishments were also realized in the areas of nurse recruitment and nurse retention. Savings in those areas have resulted from targeting recruitment travel and advertising on specific geographic areas with a known nurse surplus.

Patient Representative Program

The Patient Representative Program was reorganized to meet the challenges of ever-increasing sophistication in today's health care. The patient representatives serve as liaison between the patients and the Hospital. The patient representatives explain Hospital policy and procedures, resolve complaints, and in general attend to patient's non-medical concerns. The representatives provide individual attention for each patient, investigate problems, and monitor feedback in order to help the Hospital continually improve services. The Patient Representative Program has been successful because it has achieved a great deal of visibility at all levels of the Hospital.

**MEDICAL UNIVERSITY HOSPITAL
STATISTICAL SUMMARY**

For the 12 Months Ending June 30, 1984

Licensed Beds		510
Beds In Use	380	
Bassinets	<u>76</u>	
Total	456	

Patient Days:

General Nursing Units	100,004	
Special Care Units	8,067	
Nursery	<u>24,984</u>	
Total		<u>133,055</u>
Average Census		363.5
Average Census — Nursery		68.3
Average Length of Stay		6.8
Average Length of Stay Nursery		5.3
Percent Occupancy		72.4
Patient Admissions		19,795

Clinic Visits:

MUH Clinic	53,341	
Cancer Clinic	4,361	
Cardiac Clinic	1,839	
Family Medicine	23,243	
Eye Clinic	6,465	
Private Diagnostic Clinic	47,999	
Primary Care	<u>13,566</u>	
Total		<u>150,814</u>
Surgical Procedures		7,797
Number of Newborns		3,195
Laboratory Medicine Procedures		648,016
Anatomical Pathology Procedures		52,602
Diagnostic Radiology Procedures		90,017
Therapeutic Radiology Procedures		21,201
Nuclear Medicine Procedures		3,014
Physical Therapy Procedures		43,120
Pounds of Laundry		996,888
Number of Employees		2,234

DIVISION OF CONTINUING EDUCATION

The Division, through both its Health Communications Network and Conference Section, maintained ongoing educational support to the State's health professionals and provided instructional support to the various departments and colleges of the Medical University.

Health Communications Network

The Network's continued emphasis on live interactive teleconferencing was marked by several highly successful programming activities.

Nursing In South Carolina: Legal Aspects, a monthly series, was an ambitious undertaking which involved lengthy advance planning with the participation of more than 35 content specialists throughout the state, including nurses, attorneys, law enforcement officials and representatives of various hospitals and state agencies. The completed series provided a comprehensive overview of the legal implications of the practice of nursing in South Carolina. Concluding the series was a two-part program featuring a realistic enactment of an actual courtroom trial involving charges of malpractice.

Update: New Drugs and Their Interactions, a series of eight monthly programs concerning recently released drugs and their interactions, was presented in response to large numbers of requests from viewers following last year's series on drug interactions. Dr. Edward A. Hartshorn, Professor of Pharmacy Practice and Administration at MUSC, and an internationally recognized authority and widely published author of articles and books on the subject of drugs and their interactions, returned to discuss the new drugs. Joining Dr. Hartshorn to discuss the nursing implications of the new agents was his wife, Jeanette C. Hartshorn, a doctoral student at the University of Texas in Austin.

Image Of Success: The Hospital and You, a series of six weekly live programs, dealt with personal and professional development for health care providers. Topics included "Motivation and Goal Setting", "Dress for Business and Pleasure", "Time Management", "How to Avoid Burn-out", "Stress Relief", and "Personal and Corporate Public Relations".

In the expectation that satellite and cable service programming will constitute an even larger share of the HCN schedule, Storer Cable service was installed at the Castle Pinckney studio, giving access to the professional programming on "Lifetime" (previously named Cable Health Network). A 12-foot satellite receiving dish was also acquired in order to utilize all domestic satellites. This equipment enables the Network to have reception from the growing number of specialized health program originators. The dish also provides University access to all professional conferences available on satellite. The dish, combined with the Division's classroom, provides marketing opportunities as an "open site" facility at

the Medical University in Charleston.

Utilization of Network facilities and staff for public relations and intrainstitutional communications has shown a marked increase with television support for special events such as Dr. James B. Edwards' installation as President of the Medical University; and closed circuit coverage of the Colbert Lecture Series which featured both Dr. Philip Habib, former special peace envoy to Lebanon, and Dr. Everett Koop, Surgeon General of the United States.

In the aftermath of American rescue operations in Grenada, the University's Health Communications Network underwent an abrupt shift from its accustomed role in academe to the arena of national television news coverage. HCN is Charleston's only readily available production facility for transmitting video and audio signals to the South Carolina Education Television satellite distribution center in Columbia. HCN's clients during this hectic period included ABC-TV News, Canadian Broadcasting Corporation, Cable News Network (CNN), and several independent stations in Charlotte, NC, Hartford, CT, Washington, DC, Jacksonville and Miami, FL, and Dallas, TX.

Live satellite interviews with students from St. George's School of Medicine were broadcast from the Network's studio for inclusion in the PBS MacNeil-Lehrer Report and ABC News Nightline hosted by Ted Koppel.

Development of the state's Instructional Television Fixed Service (ITFS) system is underway with the construction of the transmitter and receiving tower having begun in Charleston and Columbia. The entire system is slated to be operational by October, 1985.

Conference Section

Due to outstanding evaluations and participation in last year's conference, "Problems in Obstetrics", the Conference Section and the Department of Obstetrics and Gynecology presented the "15th Annual Spring Symposium: Reproductive Riddles".

"Sym-PAWS-ium '83", a combined effort of the Division of Continuing Education, the Clemson Alumni Association and the MUSC Alumni Association, again proved to be successful. "Sym-PAWS-ium '84" will be held in October at Clemson. The section also presented "The Fourth Annual Southern Symposium on Vascular Diseases" in cooperation with the Vascular Laboratory at Roper Hospital.

For over a decade, the Division of Continuing Education has been devoted to educating health professionals and updating them in the latest medical advances. These educational events are presented in a cost effective manner which promotes improved patient care and health of all South Carolinians.

SUMMARY OF ACTIVITIES

July 1, 1983, through June 30, 1984

Workshops and Seminars	104
Credit Hours Offered	27,831
Accredited Departmental Activities Grand Rounds	42
Programs Produced by Health Communications Network	158
Grand Rounds Interactive Broadcasts OB/GYN	9
Internal Medicine Grand Rounds	41
Live Satellite Conferences	24
Open Circuit Educational Television Broadcasts "Openline"	45
Videocassette Tape Duplications	925
Videotape Rentals/Sales	215
Programs Provided to National Library of Medicine	25

MINORITY AFFAIRS

The Office of Minority Affairs carried on statewide efforts to upgrade health care delivery to minorities by minority practitioners in all areas of the health profession; to increase the applicant pool of qualified minorities at the Medical University in all professional schools and the graduate school; and to enhance the academic performance of minorities matriculating at the Medical University. These goals were approached through student development and recruitment, counseling, placement and retention strategies.

Minority Affairs staff members participated in more than 36 health career fairs. Information on health care opportunities as well as on entrance requirements and general academic preparatory measures was presented to approximately 12,000 high school and college students collectively, with more than 1,500 students on a one-to-one or small group basis.

In keeping with staff efforts, the four minority student organizations (Minority Student Union, Student National Medical Association, Student National Pharmacy Association and Student National Dental Association) provided recruitment assistance through high school career day projects on herpes, drug abuse, and teenage pregnancies.

The Minority Affairs Pre-Health Council, composed of representatives from six predominantly black accredited institutions in South Carolina, provided positive counseling support to students at their campuses and identified qualified Summer Health Careers Program and Medical University applicants. The High School Summer Academic Enrichment Program, which offers work and scientific research exposure to nine area high school students, successfully completed its second year.

The Library Consortium continued successful utilization of the Dean Vaughn Learning System of Medical Terminology. The system has been

found to increase memory retention of medical terms by 93 percent. Each of the six Pre-Health librarians report successful utilization of Apple III Computer systems. These Pre-Health schools have been provided seminars and workshops to further aid them with the implementation of project GOLIATH (Group on Library Interaction and Tele-Communication Horizons).

The MUSC Summer Health Careers Program completed its eleventh successful year, having recruited 30 qualified program participants from South Carolina and other states, including California.

The minority effort at the Medical University has helped bring about some notable changes over the past eight years: In 1978, there were 100 minority students at Medical University while today there are 151. The attrition rate of 50-55 percent among minority students has fallen to 4 percent or less. The number of black physicians in South Carolina has risen from 37 to 113; black dentists from 39 to 54; black registered nurses from 625 to 766; no black optometrists to four; no black physical therapists to 10; one black dental hygienist to 6; black pharmacists from 13 to 43 in 1984.

In other comparisons, there has been a 100 percent increase in black physicians between 1972 and 1982, and the number of black residents has increased from one in 1974 to 24 in 1982.

The Office of Minority Affairs has been instrumental in increasing the minority enrollment through efforts of the state desegregation plan from 3.1 to 5.9 percent which is the largest increase in the state. The Minority Business Enterprise program continues its commitment to identify and contract with minority vendors in South Carolina. The State Commission on Human Affairs has approved the MUSC university-wide "blueprint" for affirmative action.

UNIVERSITY FINANCES

The first of the 1984 Goals and Objectives was to establish a new computerized financial information and budget control system and to train University Personnel in its application. The University will convert to the new Management Science America (MSA) Family of Financial Systems on August 1.

The Finance Division is also on schedule for its planned January 1, 1985, conversion from the current Payroll System to the new MSA Payroll System. Personnel will be trained in the use of this new system in December.

A second goal was to continue working with The S. C. Commission on Higher Education (CHE) on formula funding refinement and other budgetary matters. Through discussions with the CHE staff several areas were found where adjustments to the formula were warranted. In addi-

tion, through working with the Colleges and the Registrar's Office several adjustments in the data were discovered that will result in a higher formula allocation.

Also, the formula format used by CHE was computerized to allow for immediate determination of the fiscal impact of planned curriculum changes, adjustments in data submitted and changes in the formula itself.

Other major accomplishments of the Division were:

- Received an unqualified Audit report for the fiscal year ended June 30, 1983.
- Negotiated a 71 percent increase in the rate of recovery the University experiences through the Federal Indirect Cost recovery system.
- Included the results of the University's Zero Base Budgeting exercise in the development of the University budgets for the fiscal year beginning July 1, 1984.
- Reorganized the Accounting Department and made better utilization of University computer resources, resulting in a net reduction of six positions within the Department.

To increase service and responsiveness to departmental needs, the Procurement Division reorganized its Purchasing and Materials Offices. The Purchasing Office is now composed of University and Hospital Purchasing Teams. In addition to the primary procurement offices located in the Summerall Center, an office has been opened in the hospital to better support the purchasing needs of hospital departments.

Efforts to standardize necessary supplies and services resulted in a cost avoidance of \$1,495,880. Additional commodity teams have served to intensify these efforts, and future cost avoidance of even greater magnitude is expected.

As a member of the National Association of Educational Buyers, Procurement hosted the annual meeting of the Carolinas Chapter. Representatives from approximately 30 colleges and universities were in attendance.

The Materials Office placed into operation a fully automated inventory system. It also conducted several successful public sales of surplus materials which generated additional revenue for the purchase of supplies.

In keeping with policy supporting professional training, all Procurement Officers attended at least one workshop during the year.

ADMINISTRATIVE AFFAIRS

Information Resources Management

The Information Resources Management (IRM) Department was formally created at the beginning of the year and an acting director designated. The department was given responsibility for overseeing not

only all computer-based activities at the Medical University, but also office systems, including word processing equipment, communications, reprographics, and records management. The reorganization entailed a combining of groups as well as the creation of selected new positions.

Within the applications programming area, new positions were created for a Developmental Systems Manager, a Financial/Administrative Systems Manager, a Medical Systems Manager, and an Academic Systems Manager. In the Office Systems area, a managerial position also was created and that group has now grown through the addition of an Office Systems Trainer, a Microcomputer Programmer, and more recently, an Electronics Technician who will maintain microcomputers and assist in interfacing them to the University's communications network. In the Communications area, a consultant was retained to work closely with the University in developing specifications to meet needs. Even with these additions, the number of personnel in the Information Resources Management Department grew only from 67 to 70 during the course of the year, while the number of individuals with master's degree-level or above training grew from 3 to 11. Continuing Education was stressed throughout the year for all members of the department, resulting in documented training in excess of 1,000 hours. Community service is reflected in the fact that seven people taught Computer Science and related courses at the Medical University, the College of Charleston, Rutledge College, and at an evening high school class.

Facilities

In conjunction with the organizational changes, facilities also were upgraded. New offices were constructed on the third floor of the University Services Building to allow for migration of systems personnel in advance of the addition of personnel in the Office Systems, Communications, Reprographics, and Records Management areas. The third floor of the University Services Building, where the main computer is located, was made more secure through repositioning of Data Control personnel and other changes which will make it easier for Operations and Systems personnel to perform their work, while at the same time, better securing the facilities from unauthorized entry. A new room also was constructed in the computer area for storage of magnetic tapes, thereby making this valuable resource more secure. New power was installed in the computer room to prepare for the addition of more equipment.

On the second floor of the University Services Building, where the programmers and analysts work, computer terminals were migrated from a single room to the desk of each programmer and analyst to enhance their productivity and make the job situation more attractive. The previous terminal room, with only very minor modifications, will be used as a work area by the Electronics Technician.

Hardware

To prepare for University-wide telecommunication, fiberoptic cables were installed between the University Services Building and the Hospital/Administration/Basic Sciences Building complex. Additional fiber cable will be installed to the Nursing Building area and Physical Plant as well as to the Allied Health Sciences, National Bank, Castle Pinckney, and Summerall Buildings. With the installation of this new cable, remote control equipment and telephone lines formerly required to support computing activities in the hospital are being replaced by new local controllers in the computer room, with the result that computer-terminal users are now experiencing much faster response times.

During the year, the Office Systems group helped many areas of the University acquire microcomputers. These units now are in the process of being attached to the fiberoptic network using new electronics technology. Terminals within the hospital which employ light pens also have been installed and connected to the network. To prepare for the office automation effort, as well as further changes within the academic and medical areas, new magnetic disk technology has been added to the main computer facility for storage of much larger quantities of information as well as much faster access to it. A new digital telephone system is being planned to fully access this new computer equipment. To reduce storage requirements and computer-paper consumption, a new Computer-Output-Microfilm unit also is being planned for attachment to the mainframe computer.

Software

Changes in personnel, facilities and hardware have all transpired in anticipation of new computer software systems which are in the process of implementation. One major undertaking is the computerization of the hospital. The initial stages of this effort involve the implementation of a Patient Management System for storage and retrieval of appropriate demographic information. This will be followed by a much more extensive Patient Care System involving patient medical data. To interface with these systems and replace the aging Shared Accounting System, a new Patient Accounting System is about to be tested.

Also, conversion to a new computer control system is planned and initial efforts in this direction have begun. As this effort proceeds, older control systems currently still running on the mainframe computer will be replaced. To fully utilize the new disk storage technology, new software to automatically manage this resource has been obtained. New software for inter-office communication and document exchange also is being acquired. During the next fiscal year, many offices should begin to use this software.

In addition to the patient care and office automation systems, the University has acquired new software to better manage financial and administrative operations, including accounts payable, accounts receivable, budgetary control, and inventory procurement. During the next fiscal year these systems will be expanded to include financial forecasting and modeling, as well as the Human Resources area.

IRM is now evaluating new Fourth-Generation languages to make available a programming language which is more efficient and at least partially automated.

Communications

Specifications for a new Medical University telephone system were initiated. Approval was obtained to publish the faculty and staff directory using a new format and contract for its publication was awarded. During the year, MUSC began handling daily operations directly with communications vendors.

Copier Management

For the first time a central account number paid for all copier equipment and charges were distributed to the departments. Plans were made to effect maximum savings on renewal of rental copier equipment. These savings totaled in excess of \$36,000 and the copiers provided additional features such as reduction, enlargement and document feeding.

Records Management

More than 35 departments were assisted and their needs serviced by this group. An estimated \$75,000 cost savings was realized through this service. To enhance services, the Microfilm group acquired a new film camera, paper shredder and film splicer.

Department of Human Resources

The Department was deeply involved throughout the year in implementing Private Sector Task Force recommendations and new procedures that involve hiring practices and promotions.

One of the goals for 1983-84 was the establishment of a skills inventory bank to help determine which employees were ready (skilled) for a promotion. This skills inventory bank has been updated quarterly. A Career Counselling program also went into effect and met with warm response from employees. A number of individuals were promoted (transferred) as a result of the program. A new Orientation Program is being designed for new employees with emphasis on the University's concern for their role and future development within the work unit. This program should be completed and operating very shortly.

The new Training and Staff Development Coordinator has produced a comprehensive training program offering courses in automation, productivity, efficiency, and patient and public relations. Of particular importance was the 10-part Management Development Series for mid-level managers and a training program for first line supervisors. All classes were held at the Medical University and 90 percent of the courses were taught by MUSC faculty.

In the area of fringe benefits, a year-long project was completed to expand benefits which include supplemental insurance policies for life, salary continuation and hospital indemnity. The final decision on this package will be made early next year.

The new Compensation Coordinator has been busy developing a human resource forecasting system to better anticipate future personnel requirements.

A Clerical Study was carried out which consolidated 37 classes into nine classes. Approximately 900 positions were involved.

Statewide studies were conducted and reallocations implemented on the following classes: Clerical, EEG (Special Procedures), Data Processing (Operations), Pharmacist, Respiratory Therapist, Trades, Laboratory, Pharmacy Technicians, Postal, Procurement, X-Ray Technologist, Cytotechnologist, Physical Therapist/Occupational Therapist and Ultrasound Technicians.

The grade reallocation salary adjustment rule was waived so that employees involved in grade reallocations can now receive up to a 10 percent salary increase even though they may be currently above the base of the new grade.

Office of Parking Management

A parking plan utilizing the Castle Pinckney area has been developed to provide adequate parking space for nursing staff and other employees and staff who will be displaced by the closing of the parking area that will be the site of the proposed Psychiatric Institute. An engineering firm will be selected in early 1984-85 to undertake the project, which will include drainage, paving and lighting. When completed it will more than double the capacity of the lot. The project is expected to be completed in the fall of 1984.

Meetings have been held with representatives of the Hospital and the Department of Nursing to determine the specific level of transportation and services that will be required to provide satisfactory service to shift workers. There have also been meetings with Motor Pool and Public Safety representatives to plan and coordinate shuttle bus and security services. The implementation date for these services is targeted for December, 1984.

The Colcock Hall section of G lot is being dedicated to serve guests of the Wickliffe House, guests of the President and Boards and other groups. The necessary changes in the lot will be made and the area will be in service in early 1984-85.

A plan to provide free parking for outpatients was approved by Hospital Administration and implemented early in the year.

As a result of courtesy parking, complaints from outpatients regarding parking have been greatly reduced, inpatients are complimentary of this service and revenue in the garage increased 4 percent over the preceding year.

The department's personal computer was installed in June. The word processing function is already being used, work is beginning on a program to put the waiting list on computer, and work on programs for the reregistration process and temporary permits will begin in the next few months.

Physical Plant Department

DESIGN AND CONTRACT ADMINISTRATION

Following is a selection of some of the major construction projects completed, under way or in planning during the year:

East Additton (Children's Hospital), \$50,341,494:

Concrete pourings have reached the fifth floor of the projected nine-story facility.

General Stores and Receiving Warehouse, \$1,900,000:

Design must await the acquisition of an approved site near the Medical University.

Alterations, 7th Floor, Clinical Science, Pediatrics, \$500,000:

Plans are to be completed August, 1984, to develop a 10-bed call room facility for Hospital residents and provide office space for the Orthopedic Department and activity space for psychiatric patients. Construction is to be completed by February, 1985.

Hospital Renovation Phase VI, \$3,420,838:

The Hospital Window Replacement contract was completed in December, 1983.

Hospital Renovations, Phase VIII, \$5,000,000:

A contract was awarded in June, 1983, for \$797,000 to complete the construction of the Burn Unit, Occupational Therapy and Medical Intensive Care Unit. The work should be finished in August, 1984. A

contract was awarded for the 10th floor renovations which are scheduled for completion in November, 1984.

Parking Garage II, \$7,000,000:

The architect has begun preliminary studies based on the projected site. When the purchase of this site is complete, design will continue.

Psychiatric Institute, \$8,500,000:

Design development drawings are 90 percent complete and construction documents will begin shortly. Present estimated construction starting date is February, 1985.

Nuclear Magnetic Resonance Facility, \$1,500,000:

Plans and specifications for this project are scheduled to be completed in December, 1984. No construction completion date has been established.

Hospital Renovation Phase IX, \$10,000,000:

Drawings for Phase I, renovations to 6th and 7th floor, are being prepared.

UNIVERSITY CONSTRUCTION (IN-HOUSE)

More than 30 relocation/renovation projects were handled by construction shop employees. During March/April/May most of the shops were heavily engaged in efforts to complete changes resulting from the relocation of the Psychiatric Department and preparations for the Palmetto Pavilion on 10th floor. Some of these projects were:

1. Renovation of 1st floor Research Building for relocation of OB/GYN Clinic from Clinical Sciences Building.
2. Renovation of 1st floor Center Hospital for relocation of Pharmacy.
3. Renovation of 7 Center and West Hospital for relocation of Psychiatric Department from 10th floor.
4. Renovation of 3rd and 4th floors, BCD Building.
5. Renovation of 3rd and 5th floors, University Services Building.
6. Installation of conduit and fiber optic and coaxial cable for MUSC computer systems.
7. Renovation of Health Services Building.
8. Renovation of 5 East and West service bridges for relocation of Equipment Support.
9. Renovation of 7 Center Nursing Station, Hospital.
10. Renovation of 5 Center Nursing Station and waiting area, Hospital.

TRAINING

Physical Plant employees were provided with 1,184 hours of continuing in-service training. Additionally, 472 new nurses received training in electrical safety, basic fire safety and evacuation techniques; 398 nurses, environmental service personnel, technicians and clerical personnel attended fire safety refresher courses; 84 employees received laboratory safety training; 99 Physical Plant employees received specialized asbestos removal training; 105 technicians and environmental service employees received training on lifting techniques to prevent back injuries; 16 supervisors received training on filling out accident reports; and two new employees received hazardous waste training.

PERSONNEL

State Personnel conducted a study on trade classes and this resulted in a reclassification of all shop personnel. This reclassification led to higher wage scales and will help attract skilled applicants for all the shops. The employee turnover rate continued to show marked improvement.

Business Operations

The Mail Services operation experienced a heavy volume of postal matter. Approximately 5,000 pieces of incoming mail and 4,000 pieces of outgoing mail were handled each day. In addition to U.S. mail, 3,000 pieces of intra-campus mail were handled each day.

Arrangements were made for earlier pick-up mail each morning, as well as for the U.S. Postal Service to pick up outgoing mail twice a day. Shift changes have been established to attempt earlier delivery of mail.

Motor Vehicle operations maintained a cost effective transportation system. Seven new vehicles were purchased providing various departments with modern fuel-efficient units. Shuttle bus service was updated with a larger, more modern vehicle.

An IBM personal computer was purchased to automate office procedures and to maintain vehicle maintenance and operation records in a more efficient manner.

A new Blue Cross/Blue Shield program was contracted for the students and group enrollment increased from 250 to 715 students.

The Insurance Reserve Fund established a new all-risk policy for data processing-type equipment. Coverage was for more than \$6 million in equipment value.

Cash sales from the vending operation increased 37 percent primarily as the result of the new contract commission rate that became effective July 1, 1983. Due to the curtailment of night service in the Hospital cafeteria, the vending contractor established a vending snack area to supply the needs of hospital personnel from 6 p.m. to 6 a.m.

Major repairs to Alumni Memorial House, covered by reserve funds, included a new roof, and replacement of a 60-ton chiller and a water tank. Gladieux Food Service, dietary contractor, remodeled the cafeteria serving area and also agreed to furnish a cash food service for the summer months.

All student rooms have been recarpeted, and some new beds have been purchased. Summer 1984 occupancy has been very good because of visiting students in the MUSC Summer Health Careers Program, as well as students in the Dental Assisting Program from Greenville and York Technical Colleges.

Office of Public Safety

Crime prevention surveys were conducted throughout the campus and a Crime Watch Program was initiated in the Hospital. Meetings were held with key personnel to organize Ward/Section Captains. Details of the plans and objectives of the program were favorably received.

Additional intrusion alarms were installed. A proposal was put forward to replace the present system with one that would effect a substantial cost savings to the University.

A Crime Watch "hot line" number was installed to encourage employees to report suspicious activities or suspected crimes on campus. Callers can remain anonymous and investigators follow up on all reports.

With the assistance of the State Law Enforcement Division a Uniform Crime Reporting System has been installed. A computer printout is received on all reports submitted by MUSC including the number and types of offenses, the number of arrests, the value of stolen property and the clearance rate on all incident reports. With the system, the office plans to develop a new Records Division.

A personal computer has been installed to automate record keeping and quickly furnish information on larcenies, arrests, and suspicious persons stopped on campus.

Through a special terminal Public Safety has access to the Interstate Identification Index file which allows for the interstate exchange of criminal history record information between criminal justice agencies.

A new radio system has been installed and is fully operational and a Mutual Aid Radio system has been ordered for better communication with the City Police Department. Approval for the license to operate this system is being awaited.

Permanent Dispatchers are being proposed for training in the proper use of modern communications equipment. At the present time Public Safety Officers are being utilized, which means that some security posts on campus cannot receive full security coverage.

PLANNING AND INSTITUTIONAL STUDIES

The Office of Planning and Institutional Studies began operation on September 1, 1983. It was involved in activities in the following major categories: Planning for Excellence, Annual and Five-Year Permanent Improvement Plans, Space Issues, and Special Projects.

Planning for Excellence Program

This program was designed to standardize the compilation of departmental goals and action plans; coordinate the identification of necessary additional resources and relate them to specific goals; and promote a spirit of cooperation and awareness on the campus.

A final instrument was developed which was used to retrieve the goals, action plans, and projected resource needs from every academic and administrative unit. A major accomplishment was the creation of a "Departmental Data for Planning" sheet. This sheet contained key indicators about the use of resources by academic departments (e.g., FTE's, State funds, extramural funds, and research space). The comparative analyses which were then possible proved useful in the institutional planning process.

The analyses of the goals and action plans of the various units, as well as the "Departmental Data for Planning" sheets, were compiled in a *Planning Data Book*. This book was used by the President and Vice Presidents at a planning retreat held on June 1, 1984.

The information derived from the institutional planning process has proven useful in the preparation of the annual budget of the University. The Planning Office provided the Budget Office with a summary of each unit's "Projected Needs for Additional Resources." The State funds requested were categorized according to the types of resources (e.g., human, facilities and equipment, fiscal, and information technology).

Finally, the Office participated closely in the development of a draft needs list for a potential capital campaign.

Annual and Five-Year Permanent Improvement Plans

The Office assumed responsibility for the development and submission of capital improvement plans to the S. C. Commission on Higher Education and, subsequently, to the Budget and Control Board in June of this year. This year a totally new procedure and format for developing these plans were established by the Budget and Control Board in an effort to make them more useful as planning documents at both the institutional and the state level. After a presentation to the Facilities Committee of the Commission on Higher Education, the Medical University's proposed project for 1984-85 was approved.

Space Issues

Two major reallocations of space were coordinated by the Office of Planning. The first involved the relocation of the Department of Psychiatry and the clearing of space in the Hospital for the Palmetto Pavilion. The units involved were Psychiatry, Graduate Studies, the Research Office, and the Institutional Review Board. Extensive renovations were necessary as well as the moving of offices.

A second phase involved the Department of Biometry, Office of Minority Affairs and Office of the Statewide Consortium. These units are being relocated from the University Services Building. A plan was developed for new sites for them, and the recommendations were approved at a meeting of the Vice Presidents in April.

Other plans for reallocation of space are aimed at providing more research/laboratory space for Biochemistry and consolidating Pathology research functions in the Basic Sciences Building and clinical functions in the Research and Quadrangle Buildings.

In April, a study of the utilization of more than 20 major classrooms was conducted. The Planning Office in collaboration with the Office of the Registrar proposed a new policy of centralized classroom scheduling which has now been implemented.

A major renovation of the MUSC Space Inventory System is under way to ensure more accurate and usable data about space on campus. This is being done with the cooperation of Accounting, the Physical Plant, and Information Resources Management.

Special Projects

A Faculty Orientation Film was undertaken as a joint project with the Faculty Senate and the Office of Educational Services. The film was designed to make new faculty members aware of the various academic support services available on campus.

The Office was involved throughout the year in the design, development, and analysis of a survey of faculty concerns. The results of this survey will be used for the Academic Task Force and the MUSC Self-Study for the Southern Association of Colleges and Schools accreditation process.

DEPARTMENT OF LEGAL SERVICES

The Department of Legal Services was formally created in September, 1983. A General Counsel was appointed and was given responsibility for overseeing the legal needs of the University and the University Hospital.

In addition to review and assistance with contracts and contract disputes, the Legal Department provides legal opinions and assistance concerning all facets of the University and administrative community.

In the Hospital setting legal assistance is now available to all departments and employees involved with medico-legal issues.

The Legal Services Department has been instrumental in making available legal comment for departments desiring panel and seminar presentations on medical staff liability and on timely issues facing medicine today.

In the employment area, the Legal Office has been instrumental in mediating disputes and assisting with employment problems.

INTERNAL AUDITING

Internal Auditing has been an independent department of MUSC for well over a decade, its primary purpose being to aid management in achieving the most efficient operations possible. It helps ensure that University policies and procedures which have been adopted to help safeguard assets and promote efficiency are being followed. Internal Auditing stresses that it is "internal" and a member of the management team; that its aim is to cooperate with management and assist them in meeting their responsibilities.

This past fiscal year, the Internal Auditing Department completed five regularly scheduled audits and four special audit projects requested by management. It also provided assistance to various external auditors.

Regular and Special Audits (1983-84)

Regular (scheduled):

- Patient Accounts Receivable (Family Medicine)
- Parking Ticket Revenues
- Central Stores Inventory System (follow-up)
- Purchasing (small repair/renovation contracts)
- Patient Management System

Special (requested by management):

- Motor Pool Operations
- Employee Work Hours
- Management Requested Statistical Samples
- Board Policy Manual

UNIVERSITY RELATIONS

Office of Development

The year was highlighted by a substantial increase in private gift support. Among significant accomplishments were the successful \$800,000 campaign for the Palmetto Pavilion; reaching the \$1 million level for the endowed Sims-Hester Chair in obstetrics and gynecology; participation in the Children's Miracle Network Telethon which pro-

duced pledges of some \$80,000 in Charleston and \$40,000 in Greenville; and matching a \$50,000 challenge grant from the Donaldson Charitable Trust.

Total receipts for the year exceeded \$2 million. The number of donors increased threefold while those giving \$1,000 or more grew by 25 percent to 180. Alumni giving increased both in terms of participation (by 7 percent) and total support (by 43 percent).

A planned giving program was initiated with the distribution of appropriate literature to some 2,000 prospective donors and friends. Policy statements for this program were prepared and approved by the Boards of the Health Sciences Foundation and the Medical University. A program for charitable giving through life insurance is also being organized.

The computer-based records system, listing gifts as well as alumni biographical information, was upgraded in response to increased demand. An additional 10 million character disk drive, a second printer (matrix), terminal and increased memory now provide the needed capacity.

The Health Sciences Foundation concert series featured Ella Fitzgerald in an evening of jazz before an appreciative audience. Other Foundation contributions included renovation of the small carriage house at 176 Ashley Avenue as a University guest house and the funding of a study to assess the readiness of the Medical University for a future capital fund raising campaign. An informational brochure on the Foundation was also published.

Alumni Affairs

Alumni were offered a wide range of activities during 1983-84. In conjunction with the installation of Dr. James B. Edwards as Medical University president, a series of events for the University's six college alumni associations took place during the week of October 15, including departmental open houses, continuing education programs, campus tours, "Meet the Dean" sessions, and luncheons, banquets and class reunions honoring alumni and faculty members. A President's Reception and special church services at St. Luke's Chapel for all alumni ended the busy installation weekend.

Two gatherings were held out of state for alumni attending regional or national professional meetings. In November, the Medical Alumni Association sponsored a reception during the annual scientific meeting of the Southern Medical Association in Baltimore. Alumni of the College of Pharmacy attending the American Society of Hospital Pharmacists' meeting in Atlanta in December participated in a reception and luncheon at the Atlanta Hilton.

The Nursing Alumni Association celebrated the eightieth birthday of Miss Ruth Chamberlin, Dean of the College of Nursing from 1949 to 1966, with a party in November attended by more than 200 alumni. Regional meetings of nursing alumni were held in October in Greenville, in January in Columbia and in April in Florence. The first issue of *The Horizon*, the College of Nursing's alumni newsletter, was published in April. During Nursing Spring Weekend, alumni attended the Dean's Lecture Series on "Diagnosis Related Groups and Their Impact on Nursing" and a Charleston-style luncheon and annual meeting at the historic Johns Island home of the late Miss Marguerite Andell, Director of Nursing from 1924 to 1948.

As a result of an intensive membership drive led by class agents, the Dental Medicine Alumni Association achieved the highest participation rate of the six college associations. A second issue of *D.M.D.* magazine was published in March and the annual meeting held at the S. C. Dental Association convention in April in Greenville was attended by more than 100 alumni.

The Medical Alumni Association hosted its annual alumni luncheon in Charleston in April during the yearly meeting of the S. C. Medical Association. Reunions were also held at that time for the Classes of 1934, 1939, 1944, 1949, 1954, 1959, 1964 and 1974. Honorary and distinguished alumnus awards, several student awards and special plaques to the members of the College of Medicine Class of 1934 were presented.

The Commentator, an alumni newsletter for the College of Pharmacy, was published quarterly and attendance was good at the annual luncheon meeting of the Pharmacy Alumni Association in Greenville in June.

The Allied Health Sciences Alumni Association sponsored reunions at professional meetings for Medical Records Administration, Medical Technology-Medical Laboratory Technology, Respiratory Therapy, and Physical Therapy programs. Newsletters were published by the Occupational Therapy and Medical Records Administration programs, and the Alumni Association began planning a fund drive for student scholarships.

For the second year the Medical University hosted a special event for the Old Grads Association, composed of persons who completed their studies at the Medical University 50 and more years ago, during May commencement activities. Forty-four Old Grads from South Carolina, North Carolina, Georgia and Florida toured the campus, heard lectures on modern teaching, patient-care and research techniques, had lunch with the President and the Board of Trustees and were honored participants in the graduation procession. For many of these senior alumni who graduated during the Depression years, this occasion afforded them their first opportunity to wear academic regalia in a formal commencement exercise.

In order to encourage involvement in alumni activities upon graduation, emphasis was placed upon creating rapport between the University's "alumni in residence," its students, and the Alumni Association. The Medical Alumni Association contributed to the Senior Student Ball and sponsored a reception for graduates after the Oath Ceremony. The Allied Health Alumni Association assisted with receptions for upper and lower division graduates. Two Parents' Day events were held for freshmen-sophomore and junior-senior medical students. Super Saturday for College of Pharmacy students was partially funded by the Pharmacy Alumni Association in April. The Nursing Alumni Association contributed toward Senior Night and R & R Day for nursing students. The alumni associations provided commencement gifts for the graduating classes. Plans were approved by the Medical Alumni Liaison Committee for a Pre-Alumni Council for the College of Medicine.

Medical University Press

The Medical University Press recorded more than 13 million printing impressions and generated more than \$480,000 in revenue. This output included a variety of color work.

To keep pace with the University's quick copy requirements, especially for teaching manuals, a third collating tower was added to the automated press system.

A sampling of this year's publications follows:

- Patient Care Syllabus
- Family Medicine Residency Book
- Housestaff Directions
- Clinical Inventory Update
- Physical Diagnosis Course Syllabus
- Charleston Heart Study Books
- MUSC Faculty and Staff Telephone Book
- Graduate Student Handbook
- Biometry Syllabus
- Film Group Calendar
- Central Supply Catalogs
- Chemistry Manuals
- Cardiopulmonary Brochures
- Commencement Exercise Booklets
- President's Installation Program
- "Reflections" Booklet
- AHEC Annual Report
- "Health Communicator"
- Continuing Education Annual Report
- Pharm D. Booklet

MUSC Private Task Force Report
Speakers Bureau Pamphlet
Planned Giving Brochure
OB/GYN Residency Program
D.M.D. Magazine

PUBLIC RELATIONS

The goals and objectives for public relations have been oriented toward assisting the central administration of the University in achieving overall objectives for the institution. On behalf of University advancement, public relations goals were to: 1) improve the image of the University through better communications; 2) increase statewide visibility, and 3) strengthen involvement in community affairs.

While these goals provide an outline for enumerating areas of accomplishment, day-to-day public relations responsibilities continued to be fulfilled. Twenty-four editions of the biweekly campus newspaper, *The Catalyst*, were written, edited and produced by the staff; patient condition reports for the news media statewide were issued efficiently; dozens of television news stories were arranged on campus; and news about the Medical University appeared in some 33,000 column inches in papers across the State.

Improved Image Through Better Communications

A special effort was made to acquaint internal audiences with the goals and objectives of the University. The public relations staff assisted the president of the University by helping to organize and publicize some 22 presentations attended by more than 3,000 employees. The public relations staff also began increased support for fund-raising and alumni communications. Other projects included more publicity and assistance for student organizations and student government; improved appearance of *The Catalyst*; helped specify for off-campus publication of a more useful campus phone directory; and initiated plans to assist in development of a new Medical Center logo, a new centralized Campus Calendar of Events and a new sound-slide presentation about the University, all for next year.

Increased State Visibility

A number of outstanding speakers and guest lecturers provided unusual opportunities for the University to be in the news. Visitor-speakers included Vice President George Bush, former Middle East envoy Philip Habib, U.S. Surgeon General Everett Koop, Colombian Ambassador to the U.S. Alvaro Gomez and a group of nuclear energy experts headed by former Oregon Governor Dixie Lee Ray. Public relations supported

special orientations for visiting members of the General Assembly. To improve understanding and awareness between the University and news representatives, a series of state media tours was initiated, the objective being to call on as many newspapers, radio and TV stations as possible in 35 major cities and towns throughout the State.

The University sponsored a special health screening program for legislators and government officials in the State House in the spring, kicking off a series of community health fairs around the State. The University also hosted the model health fair for volunteer agencies throughout the Lowcountry.

Strengthen Involvement of the University in Community Affairs

Public relations helped staff and organize a number of programs involving the University in community relations. Included were a record turnout of MUSC personnel for the Spring March of Dimes Walkathon, several programs and seminars in support of the Charleston Trident Chamber of Commerce such as a Red Carpet breakfast for some 300 business leaders, and a successful telethon for the University's Children's Fund through the auspices of the Children's Miracle Network.

The University initiated plans for a closer relationship with the Charleston Symphony Orchestra through sponsorship of a special Christmas concert on campus. MUSC's significant contribution to the economy was emphasized with release of the findings in a study on the economic impact of some \$320 million on the community and State by the University.

CHARLESTON HIGHER EDUCATION CONSORTIUM

Baptist College at Charleston	Marine Resources Division of the S. C Wildlife & Marine Resources Dept.
The Citadel	Medical University of South Carolina
The College of Charleston	Trident Technical College

In November, 1983, the Charleston Higher Education Consortium (CHEC) held the first statewide conference to examine the teaching/learning crises in pre-college science and mathematics. More than 100 representatives from education, government, business and industry participated. The conferees drew up a list of recommendations which were then submitted to the Governor for his consideration in drafting the final versions of his educational improvement plan.

With the University of South Carolina (USC) and Clemson University, CHEC is planning to co-sponsor a statewide program for the upgrading of middle and high school teachers of science and mathematics. Over a

period of three years, up to 1,400 teachers will participate in 53 intensive residential summer institutes covering 13 content areas. The project will also feature diagnostic testing and professional development advising for the individual teachers and a materials development and dissemination component. Through USC, the three co-sponsors have applied for partial funding of \$3.35 million from the National Science Foundation; the S. C. Commission on Higher Education has committed \$225,000 in matching funds.

CHEC has proposed to establish a model program that will demonstrate means of enabling teachers to renew their commitment to teaching and fully realize their professional potential, both as teachers and as members of a disciplinary field, the ASSIST Program (Assessment Services for the Support and Improvement of Teachers). Activities will include individual testing and assessment to determine strengths and deficiencies, mentoring and small group advising, and intensive retreats. Some 300 middle and high school teachers will be served. Teachers will be assisted in creating a career development plan and will be especially encouraged to pursue additional subject-matter training and other appropriate professional activities in their discipline.

The program will operate in specific schools in selected school districts. Charleston County School District will be the primary focus of the experiment, with additional districts participating after the first year. The Cummins Engine Foundation has awarded CHEC a three-year grant of \$30,000 in support of this program and the Charleston County and Berkeley County School Districts have committed \$30,000 and \$12,000 respectively. CHEC is now awaiting a decision from the Fund for the Improvement of Postsecondary Education, which has been asked for a three-year grant of \$336,000.

CHEC has applied to the S. C. Sea Grant Consortium for a grant of \$5,000 to support two residential retreats in the marine sciences for pre-college teachers and their principals.

To assist the member institutions in serving gifted and talented high school students, CHEC published newspaper notices in January and May advertising those college courses that students were eligible to enroll in. The Undergraduate Deans committee has agreed to explore offering courses specially designed for middle school gifted students as well.

CHEC and the Charleston County School District continued to co-sponsor the Charleston Area Writing Project (CAWP), a professional development program in the teaching of writing for teachers. The program consists of an intensive five-week summer institute for 20 competitively selected Project Fellows and an academic-year program of in-service workshops. The 1984 Summer Institute was hosted by The Citadel, following a plan to rotate host institutions within CHEC. The project

is affiliated with the National Writing Project of the University of California at Berkeley and is one of ten in-state sites comprising the S. C. Writing Project. Under the auspices of the latter, CAWP plans to expand its scope in 1984-85 to offer institutes in the humanities as well as in writing.

As follow-up to CHEC's Summer 1983 Computer Literacy Program for Pre-College Teachers, MUSC offered two computer courses for teachers in the summer of 1984. Following suggestions made after the 1983 program, the 1984 course sections were segmented according to instructional levels (elementary, middle and high school) and disciplines (language/reading and math/science). The course registered a total of 105 participants, 70 of whom were given matching funds of \$100 apiece by the Charleston County School District.

CHEC and the Charleston County School District are co-sponsoring a "Scholars-in-Residence" (SIRs) program, which was designed with the support of a planning grant from the S. C. Committee for the Humanities. The two scholars will be Dr. Joseph Harrison, associate professor of English at The College of Charleston, and Dr. Joseph Tripp, associate professor of history at The Citadel. The focus of their residences will be their service as resource persons in the schools, aiming to deepen the teachers' and students' knowledge and appreciation of the humanities by such means as team teaching, special seminars, and materials development. Given the enthusiasm generated by this project to date, the sponsors have committed to funding two additional Scholars for the spring term. The project has already received national notice, having been listed in *A Nation Responds*, which was compiled by the U.S. Department of Education to describe exemplary school improvement programs that are answering the kinds of needs pointed out so dramatically in the 1983 report, *A Nation at Risk*.

A grant application for \$430,000 has been submitted to the McArthur Foundation to support the research potential of CHEC's marine biology program. At the direction of CHEC's executive committee, the program is undergoing a major internal review by a committee of the participating academic vice-presidents. The report of that committee is scheduled for completion in fall 1984. CHEC's program in special education will also be reviewed this coming year. Through the Graduate Deans and Academic Affairs Committees, CHEC is also reviewing and in the process of revising the over-all guidelines and policies governing all of its graduate programs; this revision should be completed in 1984-85.

CHEC is coordinating the planning of a M.S. program in computer science, a program that will clearly need to draw on the faculty of several CHEC institutions in order to be adequately staffed. The planning of this program is due to be completed this coming year. CHEC is also par-

ticipating in the planning of a cooperative master's program in engineering with The Citadel, USC and Clemson. All of the parties involved in these discussions are hoping to devise a workable plan this year for meeting the needs in the area for graduate training in engineering.

Since 1982, CHEC had participated with USC and S. C. State College in planning towards full cooperation in the Charleston area in the implementation of doctoral level programs in education in accordance with the State's Desegregation Plan. The two programs were successfully initiated this past year: The Ed.D. in educational administration at S. C. State accepted its first students in September, 1983, and the Ed.D. in Curriculum and Instruction at USC accepted its first students in Charleston in January, 1984.

The CHEC Advisory Committee had its first full year of bi-monthly meetings. This group of 18 tricounty leaders has proved to be a vital and continuing source of ideas, reactions, and constructive criticism from the larger, non-academic community. The Committee showed particular concern and leadership in CHEC's various projects with the business and industrial communities and with the public schools.

The Fair Break Program, which was established to provide comprehensive pre-employment and job placement services for disadvantaged residents of Charleston's East Side, completed its second and final cycle of funding by the Fund for the Improvement of Postsecondary Education, which awarded the project \$135,000 for 1983-84. The program has now been institutionalized by its host agency, Trident Technical College, and has been awarded new funding under the Job Partnership Training Act.

After Consortium sponsorship during its developmental phase, the Educational Opportunity Center program also became institutionalized by its host agency, Trident Technical College. The CHEC and its other member institutions will cooperate fully with the Trident Technical College program to provide counseling and related assistance to tricounty disadvantaged adults and youth who wish to pursue postsecondary education.

Through the Trident Work-Education Council, CHEC sponsored the seventh year of the Summer Work-Education Program. This six-week program gives school teachers and counselors work experience in entry-level jobs in local businesses and industries so that they, in turn, can more realistically counsel their own students. The 1984 program had 19 participants and 11 employers; it was supported by a \$4,300 grant from the General Electric Foundation and the Charleston County School District began a related pilot program for school principals. This project saw five employers offering managerial-level experience and training to a hand-picked group of principals over five weeks.

CHEC continued its semi-annual compilation of a list of non-academic

professionals, particularly those in critical areas such as computer science and engineering, who are qualified to teach in local colleges and schools. The list is compiled from responses to newspaper notices and is distributed to the CHEC member colleges and the tricounty school districts.

In winter 1983, the S. C. Committee for the Humanities awarded CHEC a planning grant to explore the feasibility of establishing a humanities program for tricounty corporate and community leaders. The Aspen Institute for Humanistic Studies, which for more than 30 years has offered intensive, residential seminars in the humanities for corporate executives and other leaders, agreed to conduct a sample seminar in January, 1984, in order to "test the waters" for an extensive trial period of an Aspen/Charleston program for Southeastern leaders. The 16 participants in this seminar consisted of carefully selected senior-level managers from concerns in South Carolina and North Carolina, executive directors of non-profit organizations, and CHEC college presidents and faculty members. The reactions of this group and the responses generated through conversations with other business and community leaders from throughout the Southeast led CHEC and Aspen to conclude that a continuing Aspen-affiliated program is a feasible undertaking in this region. A year-long trial-period will see region-wide seminars offered, next November, January, and April, and a grant of \$9,875 is being sought to support these sessions.

